

# *The* AMERICAN RIFLEMAN

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# The AMERICAN RIFLEMAN

The Publication of the National Rifle Association of America

VOL. LXXI, No. 18

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## An Analysis of Game Bullets

By Townsend Whelen

### Part 1

**A**N OLD, old subject, but one of so much interest that it seems never to be worn threadbare. The world progresses. Rifles and their ammunition have gone through a series of developments and improvements in the last twenty years along with all other mechanical devices. The vintages of 1886 to 1899 have passed along with the buggy and the horse car. Today we have something new to offer, something that will interest and help the rifleman-hunter.

We like to pat ourselves on the back and tell ourselves that we were once a nation of riflemen, and are again becoming one. We point to the fact that we hold all the international records in rifle shooting. This is all very well in its way, but to be sure to retain our supremacy we should watch the other fellow lest he steal a march on us and spring something that will give him a temporary supremacy. When it comes to rifles and ammunition for big game it most decidedly pays us to watch other nations.

America is not the only country where big game is hunted with the rifle. In fact, I think that we will have to admit, if we search for facts, that we stand third when it comes to experience in the use of the rifle on big game. Where we would say that a hunter was very experienced and competent to express an opinion when he had succeeded in shooting, say, fifteen head of big game including on an average of three species, we find that there are many, many sportsmen in other countries whose rifles have laid low 200 to 500 head or more, including twenty to forty species, and in discussing matters in connection with big game shooting they base their opinions on such mature experience. I think, therefore, in considering this subject it will most decidedly pay us to look to the best experience and thought of the world, rather than to limit ourselves to what we alone have done and think. Now it happens that when we set out to find the opinion of those outside the United States whose experience is really worth considering, we find it hidden where it is not available to the mass of Americans. True, there are many books available on big game hunting the world over, and most of these mention the rifles used. But the best works, and the best experience of the more mature hunters of the world has not been given to the public. It is a strange fact that prac-

tically all of this valuable data has been locked up tight in privately published works taken almost exclusively by British sportsmen of wealth. The mass of matter obtainable in de-luxe books of limited circulation, and not generally found in libraries, has been a revelation to me. I have so far been able to delve but slightly into it, but what I have found I think will be most decidedly worth while.

To begin with I shall make certain assertions, and then I shall endeavor to prove these assertions by what I believe to be a correct interpretation of our own experience, and that of the world's greatest hunters. At the start, perhaps, I had better state that my sole qualification as to ability to interpret correctly this wealth of information lies in thirty-two years' study of the sporting rifle, and in big game hunting in three continents covering an equal time, during which, to the best of my recollection I have shot in fair sport, and in the majority of cases unaided by a guide, eighty-six head of big game, including fourteen species, and have been in at the death of probably as many more shot by friends. I have also, perhaps, a rather close acquaintance with a large number of sportsmen and professional hunters of considerable experience who have given me the benefit of their opinions.

My assertions are:

1. We may assume at the outset that any of our series of cartridges from the .38-40 and the .30-30 up are perfectly satisfactory for deer at moderate ranges. Deer are easily-killed animals. Because a weapon and its cartridge are suitable for deer does not necessarily mean that it may also be suitable for other larger game. Big game, from the standpoint of suitable weapons, may be divided into "thick-skinned" and "soft-skinned" game. The first class includes only elephant, rhinoceros, hippopotamus, and African, Indian, and related species of buffalo. Soft-skinned game includes all the other species of big game.

2. Certain cartridges using bullets that may be perfectly satisfactory for North American big game, may fail on larger and tougher soft-skinned game of other countries.

3. Certain cartridges using certain bullets are perfectly satisfactory for use on the soft-skinned game of *any* country,

although from the standpoints of utility certain of these cartridges may require such heavy rifles, and may give such heavy recoil that they would not be considered by the average sportsman. Those which do not require excessively heavy rifles, and which do not give excessive recoil include calibers from .266 inch up to .412 inch diameter of bullet. The bullets must be of a certain weight, and must be designed to mushroom satisfactorily without going to pieces on impact, and the velocity must be such as to favor this. For example, so far our inventors have failed to produce an expanding bullet which will not fly to pieces if the velocity be increased beyond a certain point. The weights of these bullets and the allowable muzzle velocity are shown in the following table. The construction of the bullet will be dealt with hereafter. The minimum velocity is the least that will assure the necessary penetration. The maximum is that above which the bullet suitable for soft skinned game will usually fly to pieces on impact with a combination of flesh and heavy bone. Bullets of a number of constructions are suitable at the lower velocities, but only one type of expanding bullet is suitable at the maximum velocity. Needless to say, this type of bullet at the maximum velocity will give the maximum effect. The maximum velocity also has the advantage of more nearly minimizing the misses which may occur through the errors which the sportsman makes in the estimate of the range.

Diam. of bullet	Minimum weight of bullet	Maximum weight of bullet	Minimum muzzle velocity	Maximum muzzle velocity
Inches	Grains	Grains	f. s.	f. s.
.266	150	165	2100	2400
.285	160	180	2100	2400
.308	200	230	2000	2400
.358	250	300	1800	2400
.412	300	400	1600	2400

4. The only bullet so far found, (excluding the full-jacketed or solid bullets which are only suitable for thick-skinned game) which will mushroom on impact with flesh and bone, and still hold together and penetrate at velocities around 2300 to 2400 f. s., is one having the jacket covering the base, and only partly closed at the point with just a pin head of lead exposed, or else with the point formed with a small hollow extending only through the jacket and not into the core. The jacket of the bullet must be both thick and tough. Heretofore such a bullet has not been produced in the United States.

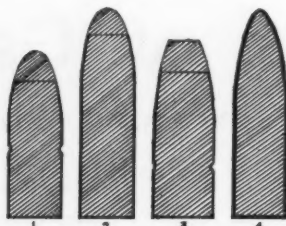
5. Energy is very misleading as a measure of the killing quality of a bullet. Considered alone it is worthless as such. It will therefore not be considered herein at all.

\* \* \* \*

I shall now attempt to prove these five assertions, first presenting my own analysis of the experience of American sportsmen using American weapons of American big game.

We will consider black powder obsolete, and will not go back to those good old days when weapons using it were in vogue and when big game was so unsophisticated as to offer easy shots at short range. The Winchester model

1894 rifle for the .30-30 W. C. F. cartridge was introduced May 16, 1895. Owing to its cheapness, light weight, high velocity, and accuracy compared to previous black powder weapons it at once became very popular, and it has since retained this popularity for the same reasons, so that even today it is easily the most used rifle for big game shooting in America. The cartridge has proved excellent for deer. The soft point bullet has plenty of penetration for such game, and at a muzzle velocity of 2,000 f. s., is of such construction that while mushrooming well, it still holds together so that it usually penetrates through the flesh and bone of deer to the skin on the opposite side



CONSTRUCTION OF BULLETS

1. The .30-30 bullet. 170 grains. Has proved good on deer at M. V. 2000 f. s., but on larger game, owing to light weight, lacks momentum to always penetrate to the vitals. So much lead exposed, and so thin jacket (about .015-inch) that if the velocity is increased much there will be increased tendency to go to pieces and hence penetrate less.

2. The .30-40 bullet. 220 grains. Owing to its weight it penetrates well at M. V. 2000 f. s., and is suitable for the largest American game. When used in Springfield at M. V. 2300 f. s., and above it often goes to pieces on heavy game owing to the amount of lead exposed and thin jacket (about .02-inch), but enough heavy particles remain to get into the vitals, so it is fairly good, but not nearly as good as No. 4.

3. The .33 W. C. F. bullet. 200 grains. Known as a meat spoiler. The thin jacket, the large amount of lead exposed, and the flat point make it mushroom too quickly. It gives big, superficial wounds but often fails to penetrate. Good on deer, elk, and caribou, but not ideal for moose and bear.

4. The ideal bullet according to our present knowledge of the subject. .30 caliber, 220 grains. Has the weight necessary for deep penetration, and thick jacket and small exposure of lead will hold it together up to velocities of 2400 to 2500 f. s. It mushrooms to good size, but still retains most of its weight, so on all soft-skinned game it can almost always be relied upon to penetrate through heavy flesh and bone straight to the vital parts at which it is aimed.

of the animal, provided the range does not exceed about 200 yards. Beyond this range it does not seem to penetrate well enough due to diminished velocity. Note the construction of the bullet in the accompanying sketch, particularly the amount of lead exposed at the point and the thickness of the walls of the jacket. Such bullets mushroom well on flesh and bone, but when fired at a muzzle velocity much over 2,000 f. s. they fly to pieces if they strike a bone, and their fragments fail to penetrate deeply enough. The .30-30 W. C. F. cartridge has killed all species of big game in America, but on the larger and tougher animals such as bear, moose, elk, and goat, in the great majority of cases it has killed poorly, many bullets being required to do the work where one should have sufficed. It is decidedly an inhumane cartridge for larger game than deer, an unsportsmanlike cartridge, and it is largely responsible for the thinning out of our larger game because its users have so often

sent three or four animals off to die lingering deaths before they got one to fill their license.

A year before the introduction of the .30-30 W. C. F. cartridges, namely on April 26, 1894, the .30-40 cartridges had made its debut on the American sporting market. At first its use for sporting purposes was confined almost entirely to the Winchester single shot rifle, (which was the first weapon exclusive of the military Krag adapted to it,) and the Winchester Model 1895 repeating rifle. This cartridge proved excellent and satisfactory for all American game. While it had the same velocity as the .30-30 W. C. F., the weight of the bullet was 220 grains as against 170 grains for the .30-30, and this increase in weight was sufficient to give the bullet the necessary momentum to drive through the flesh and bone of the larger animals into their vitals. The construction of this soft point bullet was practically the same as that of the .30-30 bullet, except that the jacket was just a little thicker, and at its relatively low muzzle velocity of 2,000 f. s., it mushroomed well and yet held together. About 1906 the magazine *Outdoor Life* took a census of the favorite rifles of our more noted big game hunters and guides, and in those localities where bear, moose, and elk were found rifles for the .30-40 cartridge were by far the most popular. I have myself used both .30-30 and .30-40 rifles in hunting in New York, California, British Columbia, and Panama, and my experiences have been exactly in line with the above.

Next came the Springfield rifle and its cartridge. It was first popularized for sporting use by President Roosevelt and Stewart Edward White. They used the full jacketed bullet with good effect on African game, trying also the soft point bullets of usual American design, but discarding them because they went to pieces too quickly and usually failed to penetrate into the vitals of the game. This was because these soft point bullets had been given too high velocity when used in the Springfield. Had they adhered to a muzzle velocity of not over 2,100 f. s. for the 220 grain bullet they would have gotten good results so far as killing qualities are concerned, practically duplicating the .303 British cartridge which has been used with excellent results in Africa for the past 25 years. What happens to the full jacketed Springfield bullet, or other full jacketed, pointed bullets at very high velocity, when they strike game is clearly shown in the illustrations of bullets fired into game herewith. It tumbles over on striking, and then it usually rotates as it passes through, giving fairly good penetration and destroying a fair amount of tissue, so that it is a good game bullet *when it does this*. But extended experiences with it has proved that sometimes, instead of penetrating in the direction in which it was aimed, it dived off at an angle, often travelling under the skin and causing a trivial wound, or going off at some other angle in which it could not reach vital parts. Eighty to ninety per cent of the time it performed well, but in the remainder of cases it was a total failure. It was entirely too uncertain so the cartridge companies gave us pointed expanding bullets for the Springfield cartridge.



At first we thought these were very good. They flew to pieces so quickly and so energetically due to their high velocity that we began to talk of "explosive effect" in connection with them. On broadside shots where these bullets or their particles easily got through the ribs or flank they, did finely, the "explosive effect" often completely disrupting the contents of the chest or abdominal cavities over considerable areas. Novices who had this experience praised these bullets highly, and they were quite the rage for the time being, just as other ultra light bullets at extremely high velocity,

like the .250-3000 and the newer hi-speed cartridges, have had their days. But it was gradually found that all these light, ultra high velocity expanding bullets "exploded" too quickly on striking the shoulders and hips of heavy game, causing much destruction in these parts, but in many cases failing utterly to get through the thick bone and muscle into the vitals. Very grudgingly the cartridge companies came to the same conclusion and produced pointed expanding bullets of 180 grains for the Springfield. These heavier bullets were found much better for the larger species of big game, just

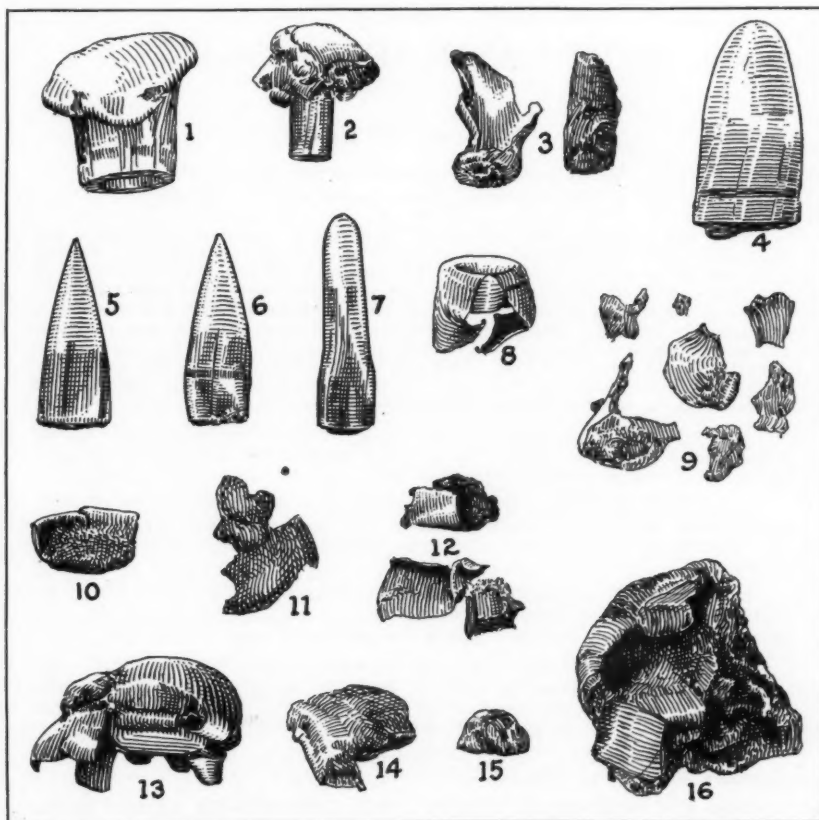
as in the earlier days the 220 grain bullet of the .30-40 was found much superior to the 160 or 170 grain bullet of the .30-30 cartridge. What happens to such bullets on striking game is clearly shown in the accompanying illustrations. They go to pieces badly, but in most cases, due to their increased weight over the older 150-grain bullets, they have sufficient momentum to get through shoulders or hips of larger game, and in many cases there are two or three particulars of the 180 grain bullet that retain sufficient weight to penetrate clear through to the skin on the opposite side of the animal. However, in only a very small proportion of cases has this bullet or its particles penetrated clear through moose, elk, mountain goat, or large bear. It has proved to be an excellent and reliable bullet on all American game except perhaps the big brown bears of Alaska, but not so on African game. African game seems to be much tougher and harder to kill, and to have a thicker skin than our own animals and recent African hunters have brought us the word that in the Dark Continent this bullet leaves much to be desired.

When Stefansson undertook his second expedition along the Arctic coast of Canada and to Victoria Island, and discovered the now-famous Blond Eskimo, he used an ordinary 6.5 Mannlicher Schoenauer rifle, and his ammunition was loaded with 160-grain soft-point bullets, that is, the long heavy bullet corresponding to the 220-grain bullet in .30 caliber. In his book, "My Life with Eskimos" he tells of frequently shooting two caribou with one shot, that is shooting through one animal and killing another in rear. But on his last expedition, the story of which is told in "The Friendly Arctic," we do not find any such accounts, because on this expedition he used the Mannliehn-Schwenauer rifle modified by Gibbs, of Bristol, England, to take his 6.5 m.m. magnum cartridge with a 140-grain bullet and a muzzle velocity of about 3000 f. s. The higher velocity gave a much flatter trajectory and on caribou the lighter bullet killed quite as well as the heavier one, but it would not shoot through one caribou and kill another in the rear. It lacked penetration—it flew to pieces too quickly.

Larger caliber heavy rifles have also been developed in America, and used to some extent on our game. The rifle for the .405 W. C. F. cartridge is a good example. Many of such rifles and cartridges have proved amply powerful enough for our own or any other thin skinned game, but they are not popular, chiefly because of their recoil, weight of rifle, and weight of ammunition, also their relatively high trajectory. Most sportsmen are much more interested in a small bore if it can be made to meet their needs, and therefore I am confining myself mostly to a discussion of such weapons, and believe that I can show that a certain combination can be relied upon to give the desired results in every way.

This combination consists of a rifle in bore between .266-inch (6.5 m.m.) and .308-inch (.30 caliber), firing a soft point bullet of relatively heavy weight with heavy jacket and just a pin point of lead exposed, at a muzzle

(Continued on page 13)



BULLETS RECOVERED FROM GAME

- 1.—577-100-750 full-jacketed bullet. Elephant. In ear hole, through brain, and under skin on off side.
- 2.—30-1906-220 soft point. In behind shoulder of lion, through off shoulder, and lodged under skin. Most of these bullets used on African game mushroomed somewhat more, and some against bone considerably more.
- 3.—30-1906-150 service full-jacketed. Kongoni shot in chest, cutting first rib and then three medium ribs on off side, and found lying in between meat and skin.
- 4.—577-100-750 full-jacketed. In behind shoulder of an elephant, passed through the heart, and lodged in off shoulder.
- 5.—30-1906-150 service full-jacketed. Zebra shot in front of shoulder through shoulder blade, broke rib, and lodged under skin on off side.
- 6.—30-1906-160 service full-jacketed. Zebra. In behind shoulder, broke point off shoulder, and lodged under skin.
- 7.—30-1906-220 full-jacketed. Elephant. Through shoulder low down, passing through heart, and found under skin behind off shoulder.
- 8.—30-1906-180 open point. Oryx Biesia. Passed through shoulder and found in chest cavity.
- 9.—30-1906-180 open point. Bull moose. In behind shoulder, cutting rib, and pieces found in chest cavity.
- 10.—30-1906-180 open point. Lion. In behind shoulder, through off shoulder, and found against skin.
- 11.—30-1906-180 open point. Lioness. In at point of shoulder, and lodged under skin on opposite side. Lungs torn to pieces.
- 12.—30-1906-180 open point. Lioness. Through both shoulders and found beneath skin on opposite side. Small particles of lead in track of bullet.
- 13.—577-100-750 soft point. African buffalo. In behind shoulder, broke opposite shoulder, and found against skin near front of off shoulder.
- 14.—30-1906-180 open point. Lion. Low behind shoulder, broke and lodged in off shoulder, messing up heart badly.
- 15.—30-1906-180 open point. Lion. Low in shoulder, broke rib on off side, and lodged under skin.
- 16.—577-100-750 soft point. Large lion. In at the point of shoulder, and lodged under skin on opposite side after breaking next to last rib on off side.

# Selling Rifle Shooting to the Big City

By C. B. Lister

IT is a far cry from an Indiana rural shoot to a New York City smoker, but both the article in the last issue and the story following, demonstrate the same underlying principle. Give your prospects what they want and advertise it sufficiently well so that they will know where to come for it, and you can sell them. The story following was prepared from material submitted by M. Joseph Martin last year. It has been held until this time awaiting what appeared to be the most opportune moment to broadcast it. It fits in exactly with the preceding articles and should be of particular interest to the large number of riflemen who are operating in the larger centers of population.

In most cities a "smoker" is one of the most conventional forms of evening's entertainment for the sportsmen of a community. The New York Central Rifle Club, therefore, naturally turned to a smoker as the most practicable method of selling rifle shooting to the community in which the club operates. The hand-bill covering the event was very well planned to appeal to the type of sportsmen whom it was desired to reach. Attractive hand-bills are not hard to prepare, and are one of the most sure-fire methods of advertising a coming event. Notice that in the case of this affair sportsmen were not begged to come and enjoy something for nothing. It is customary to charge a nominal admission fee at smokers. Therefore, it was essential to charge an admission fee if the New York Central affair was to have the necessary prestige to make it a success. Everyone realizes that it costs something to shoot, but everyone also realizes that it costs something to engage in any kind of sport, and it cannot be too often repeated that the type of men who will help make your club a success and help to put the rifle shooting game on the plane that it should enjoy in your community, are the men who expect to pay and are willing to pay as they go.

## A REAL EVENT UNIQUE SMOKER

OF

THE NEW YORK CENTRAL ATHLETIC ASSOCIATION

TO BE HELD AT

Recreation Room, New York Central Office Building

466 LEXINGTON AVENUE, NEW YORK CITY

FRIDAY EVENING, FEBRUARY 2, 1923

EIGHT O'CLOCK

Admission 50 Cents

Get Tickets from J. C. FAGAN, SECRETARY, Room 1523,  
466 Lexington Avenue, or any member of the Association

With ever increasing love and respect for American traditions in shooting and sport, BE IT REMEMBERED, that we have been enabled to persuade the following gentlemen, most of them world renowned sportsmen, hunters and target shots, to give us an exhibition and lesson in everything pertaining to marksmanship. No such notable coterie for this purpose has ever been gotten together before. Come and bring your friends and learn about the up-to-date rifles, pistols, revolvers and accessories of the game, how to shoot and handle them in the most approved style, and, at the same time, have a barrel of fun. This will be a regular picnic for all hunting and target shots, where every man can get a "close-up." Do not fail to remember that the International Matches of 1923 will be shot in America.

MR. LOUIS M. MAURER, 91 years young. SCHUETZEN RIFLE. An old master and an ex-president of the famous Zettler Rifle Club, which had "no second." It is a real inspiration to see Mr. Maurer shoot.

MR. HARRY M. POPE. EVERYTHING IN OFF-HAND RIFLE SHOOTING. For years the holder of the world's record at 200 yards off-hand. "Stand on your hind legs and shoot like a man." In a class by himself. The greatest riflemaker the world has ever known.

MR. KARL T. FREDERICK, Olympic Champion. EVERYTHING IN PISTOL AND REVOLVER. Knows the game from every angle and is noted for his style and marvelous holding. This is the opportunity to see a great artist.

MR. JOHN W. HESSON. ALL POSITIONS IN RIFLE SHOOTING. Has shot on teams which represented the U. S. nine times in International Rifle Matches, scoring eight firsts and one second, in all parts of the world. The world's greatest all around rifleman and the standard of nerve and style with the rifle.

MR. J. BAUMAN, SWISS KNEELING STYLE, RIFLE. A very fine European Match Shot. This is a fine style for hunting where no sling is used.

MR. LEO MANVILLE, SOUTH-PAW. SPRINGFIELD RIFLE, RAPID FIRE, with dummies. Very difficult for the ordinary left-handed man.

JOSEPH MARTIN, Chairman  
LEO MANVILLE  
PAUL LANDROCK

Shooting Committee.

One feature of the smoker which was unique, in addition to the unique form of entertainment offered, was the fact that sportsmen in attendance were not asked to sign up with the rifle club while they were there. The wisdom of this rather novel procedure at a Boosters' Meeting is based on the fact that smokers are expected to provide entertainment for those in attendance and at the same time, incidentally, to provide a little extra cash for the Treasury. The sportsmen in attendance are fully aware of these two considerations, and are apt to resent any attempt at "fleecing" them while they are out for an evening's entertainment. Furthermore, it is

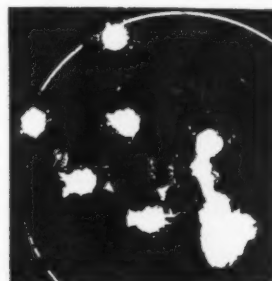
within the realm of possibility that the club may desire to stage a similar event later on, and word that the smoker was merely camouflage to cover an attempt to get men to sign up with the club, would probably hurt the attendance at subsequent affairs. It is quite certain that the affair, if properly handled, will result in added good will toward the club on the part of sportsmen in the vicinity, and must perforce bring new members into the fold as time passes. It should be noted that every one of the headliners listed on the hand-bill was a rifleman, every one of the attractions was some kind of a rifle shooting performance.

(Continued on page 12)



# Loads for 8 Millimeter Cartridges

By J. R. Mattern



Actual size group obtained at 100 yards with .32-40 jacketed bullet and 16.3-gr. No. 80 powder.

THE undeniable attractiveness of various Mauser and Mannlicher rifles when offered at the low figures of the past months does not extend to the supply of ammunition of 8 mm. caliber available for them; or rather the rifles do not seem so attractive to an American shooter when viewed from the angle of their cartridges.

The 8 mm. story is difficult to tell. Several different features of the so-called caliber and of the guns made for it ought to be explained in the first sentence. Since one thing at a time is our best speed, it may be well to lead with this: that in a large number of the rifles calibered in throat, bore and grooves, there were found twenty-two different combinations of dimensions. There was no standard. The extreme variation from gun to gun is almost as much as the difference in caliber between 32 Special and 33 Winchester, and more than 30-1906 and 32 Special differ. Details are given in a later paragraph.

Certain studies recently were made with a view to broadening the usefulness of three of these rifles owned by local hunters. A large number of tests and trials of handloads were made in order to develop a load or loads that would be cheaper than full factory ammunition, and that would be more suitable for harvesting small pot-meat and for practicing on restricted ranges. The information uncovered may help other owners in selecting full power cartridges that are better for their particular guns. It also may show intending purchasers of this caliber what a scandal-ridden family they are marrying into.

Eight millimeters is a dimension equal to about .315-inch. The catalogs listing 8 mm. cartridges often include in parenthesis the term 7.9 mm., which might lead one to think that the cartridge really was the latter instead of the former caliber; or perhaps that the cartridges made for 8 mm. would chamber and shoot in other rifles of 7.9 mm. caliber. Both of these surmises may or may not be correct in any instance. In the words of some old classical writer now forgotten, "the only way of finding out is to ascertain," in any one instance.

Of the three rifles owned locally, one was accompanied when it arrived by several boxes of imported soft-point cartridges. The bullets measured rather uniformly .318-inch, which

was not 8 millimeters, nor yet an enlargement of that dimension equal to the groove depth of the gun. These bullets weigh 225 grains and have long, full round noses. The powder charge is 41.7 grains of flat-flake German powder.

What sort of a barrel was this ammunition intended to squirt through? that was the next question. A lead plug showed the groove diameter to be close to .325-inch, and by means of shaving the plug down between land marks, we learned that the land or bore diameter must be roughly .312-inch. The rifling was therefore more than .006-inch deep, which is half again as deep as our usual American rifling, and would bite very hard on the hard cupro-nickel jackets of bullets.

Those .318-inch bullets were supposed to expand to .325-inch — an expansion of seven thousandths of an inch. And still we have not told the worst.

The other two hunters' rifles were then calibered. One had a groove diameter of only .3185, with a bore diameter of about .310-inch, while the other one was possessed of big-bore ambitions. It measured .3285-inch in its grooves. Its land dimension was only about .3155.

The first rifle, which incidentally was fitted with a telescope made by "Dr. Walter Gerard, Charlottenburg," was visibly throated out for a long, full bullet. At the point in the throat where the case ends is an abrupt square shoulder. In front of that for about three-eighths of an inch is a bevel, and beyond that for more than half an inch the rifling is cut away.

In this rifle with its own imported ammunition of longest type, the bullets have to jump about half an inch before they strike the rifling. The bullets previously described are 1.187 inches long. Of this length almost an inch projects from the case and only the three-sixteenths of an inch is seated in the case — and still the chambered bullet has to jump that half inch.

Now I ask you as shooter to shooter, are we coming or going, and where are we at? First we find that the bullet is seven thousandths of an inch sub-caliber. Then we discover that it has to jump half an inch before engaging rifling which is half again as deep or twice as deep as rifling we have grown accustomed to in modern smokeless guns.

And still the worst is yet to come.

Of the other two rifles, the one with big-bore .3285-inch groove diameter refused to chamber the imported cartridges described. An examination of its throat showed little bevel and no reaming out of the rifling to speak of. Evidently it was chambered for the short 154-grain spitzer bullet which we have come to know in German war ammunition. Had this rifle been worn a little, or had its rifling been a shade less deep, it would have accepted the 225-grain round-nosed ammunition, although the results of shooting the load probably would have been uncertain to say the least, due to lack of bullet resistance in building up pressure to an even-burning stage as much as to gas escape and bullet wobble.

The third rifle, the one with the modest .3185-inch groove diameter, also had a short throat, but not so short that it would not chamber those imported cartridges with 225-grain round-nosed bullets. Yet it was designated by the owner on the basis of certain documents in the *spurio versant* language — I could not read them — as a 7.9 mm. caliber, intended only for the spitzer bullet of 154 grains.

Here we pause to get our bearings, or to see if there are any bearings. In the preceding paragraph it appeared that a rifle, or one rifle at least, chambered short for the 7.9 mm. spitzer cartridge had a groove diameter of .3285-inch. If such diameter was "standard" what must be the "standard" bullet diameter for these spitzers? Suppose the figure should be .325-inch, or larger — what would be the effect of trying to fire such bullets in a barrel measuring only .3185 in the grooves? And while we are supposing, let us presume for a minute that we chamber one of these spitzers in the first rifle described, with its long throat — it would chamber easily and loosely — but on being fired the bullet would jump more than an inch to catch the rifling. The inner ring on the bull of military targets would surely NOT be required to decide ties when folks were using that rifle and such cartridges in it.

One more bit of confusion may be added to the mess before we struggle out to firm ground again. A cartridge was obtained which was said to be strictly correct 7.9 mm. 154 grain spitzer type. The weight was right.

Diameter of its bullet was .311-inch. It dropped right through two of the barrels.

I confess inability to weave any sort of logic from the 8 mm. situation. In an article one likes to reach some conclusion, both reader and writer, but in this matter it can not be done while following a foreign "standard" of dimensions.

Captain Crossman, I believe, wrote some months ago in a magazine about six of these rifles in the stock of a dealer who decided to have them tried before he sold them. The result was that three or four of the six actually *bulged their barrels*. The explanation doubtless lies in their interior dimensions. Consider how the pressure must fail when a light spitzer bullet of sub-caliber is fired in a loose chamber and throat, with a free jump of an inch to the rifling, and then perhaps a land diameter as large as the bullet. Keep right

expansion in front of the light pressures, we obtained and tried some of both lead and jacketed types. Bond bullet A328969 was also tried. It measures .332-inch in diameter, and weighs 167 grains, unsized.

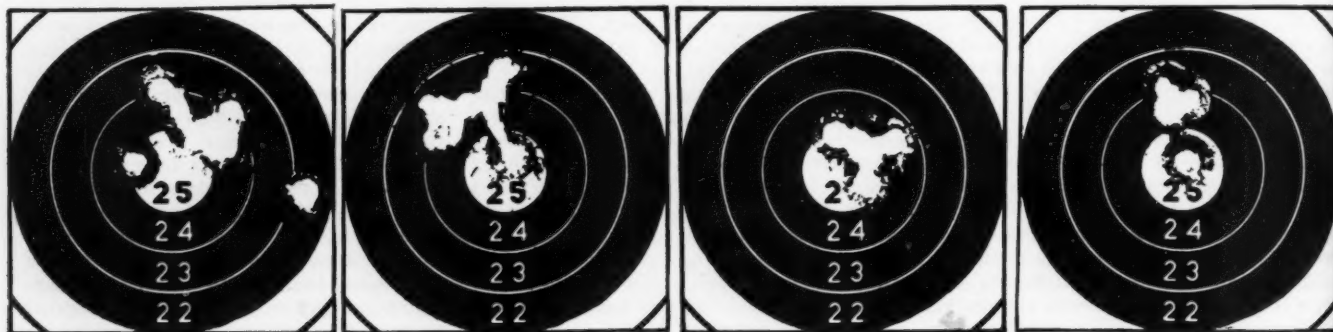
All of these bullets did unexpectedly well, perhaps due to their excellent design and construction. The 32-40 jacketed bullet gave smallest groups; the Bond next; the 32 Special jacketed bullet next; and the 32-40 lead bullet next. That fourth best grouping, however, after a bit of jockeying with the powder charge to learn what it ought to be for the individual rifle, is still smaller than the average of accuracy claimed by the large rifle makers for their older or black powder type calibers.

Of the Mausers, the one with .3185 groove diameter and medium throat shot the best. It did not seem nearly enough representative

at the point, or has its bearing diameter farther back than the 32-40, which holds the .3210-inch diameter for three quarters of its length. That is probably why it shoots a little the finer. The latter weighs 165 grains and the former 170 grains.

How any of them shoot well in view of their sub-caliber and their lengthy jump to the rifling is a mystery. The fact that they do, however, adds greatly to the usefulness of these bastard rifles.

The bullets used were Western Cartridge Company make. The empty cases were Remington of that maker's new 8 mm. Special type. The bullets were an easy pressing fit in the necks of these cases as they came from the factory. Loading was done with Bond tools. The Bond neck-sizing was .352-inch in diameter, and was useless because too large, except where lead bullets were sized down



32-40 Lead Bullet, 14.8-gr., No. 80 32-40 Jacketed Bullet, 16.3-gr., No. 80 32-40 Jacketed Bullet, 14.8-gr., No. 80 32-40 Jacketed Bullet, 16.5-gr., No. 80

on considering before shooting, on the subject of what happens when a heavy, 225 or 236 grain bullet of groove diameter or perhaps over-groove diameter is fired in one of those short-throated 7.9 mm. rifles with no jump to the rifling, lands unusually deep, and a powder charge generously heavy, intended to overcome the losses in loose chambers. There is food for thought in these points.

Each owner of an "8 mm. rifle" should caliber his barrel and select ammunition, components and powder charges according to what he finds. The range of variation is five or six per cent in bullet diameter, 20 per cent or 25 per cent in powder charge, and upwards of an inch in throat "lead."

The first rifle described is undoubtedly intended as an original Model 1888 caliber 8 mm., and its imported ammunition I have measured and weighed is of that same description. The other two rifles probably are more or less in the 7.9 mm. family. To know the name of one's proper cartridge ought to help in buying ammunition, but what sort of cartridge would you buy, now, for any one of these rifles, and how would you select it?

A more cheerful outlook developed when we worked up reduced charges. Knowing the groove diameters of the barrels, we began to look among the various American 32's for bullets that might approach .325-inch diameter. Their scarcity was appalling. The 32-40 and 32-Special, however, offered bullets measuring .3210-inch, and with misgivings as to lack of

of the common run of these 8 mm. calibers, however, hence we selected the original Model 1888 Mauser with long throat and groove diameter of .325-inch, sighted with telescope, to make the groups for publication with this story. The other Mauser seemed to have a crooked or rough barrel and did not shoot at all to compare with its mates.

At 25 yards one group with Western 32-40 jacketed bullet measures three-eighths of an inch, a second group measures half an inch, and a third measures five-eighths of an inch. At 100 yards this same load of the above bullet and 16.3 grains of No. 80 powder gave groups which measure one and a half inches across.

With lead bullets the 25-yard groups enlarged to three quarters of an inch or a full inch, and at 100 yards the same load gives a proportionate four inches or thereabouts. Powder charge found best was 14.8 grains of No. 80.

Unique powder was not tried with either lead or jacketed bullet, but doubtless would have done very well, as also would any bulk smokeless shotgun powder in suitable charges for this shoot range shooting.

So accurate at 25 yards was the Western 32-40 jacketed bullet load that when the bullets did not all cut the same hole, one had a distinct sense of pulling off, and could call his shot precisely. All these bullets are shorter than the imported factory 8 mm. bullet by a quarter inch. The 32 Special bullet is less full

only to .229 or .230-inch. For the jacketed bullets mentioned, a neck die measuring .340 is needed. The heads of the cases are almost identical with 30-1906 case heads, hence can be decapped and recapped in tools for that caliber. All foreign cases are fitted with Berdan primers, and can not be reloaded.

European practice in design of bullets is to employ a sub-caliber bullet with a thin, soft jacket, and to depend on upsettage and displacement of metal by the lands as the means of sealing back gases and obtaining true flight. American practice, in general, employs groove-diameter bullets with jackets hard and thick enough to prevent much or any upsettage.

The Western jacketed bullets used, and in particular the 32-40 bullet, DID expand to full groove diameter of the .3250-inch Mauser barrel, as determined by measuring bullets recovered uninjured. True, the expansion was not quite complete. It did not fill the inner corners of the lands, and probably it did not make a perfect gas seal. No 80 powder is known to be very quick. One of its faults in larger charges is to set up high pressure in the case, instantly, but in this loading that fault becomes a virtue, since it unquestionably assists in more immediate upsettage of the bullet. Judging from other calibers with similar loading, the pressure of the 16.3-grain load was perhaps 25,000 pounds.

Despite the good work done by this .3210-inch diameter bullet, the ideal is still one of groove diameter for each individual rifle. The



32-40 bullet is not ideal. Its use is suggested because it is readily available. If another can be found that is nearer the dimensions of any particular barrel, it should be used instead, bearing in mind the need for a long bullet to minimize jump before reaching rifling. Probably in many 8 mm. rifles, good cast bullets of a diameter one or two thousandths larger than groove diameter may do as well as or better than any jacketed bullets obtainable, in reduced loadings. The deep heavy foreign rifling displaces much lead, hence in these barrels we do not need the usual three thousandths oversize diameter of cast bullets used in American high power rifles. The various models of Mauser and Mannlicher rifles made in 8 mm. and 7.9 mm. calibers are too numerous to describe or explain here. Some of them are very fair guns especially those chambered for the Model 1888 Mauser cartridge and the Model 1910 Mannlicher cartridge, which two may be almost identical except for some small difference in bullet weight and forward shapes. Others of the rifles compose a misbegotten brood hatched from an ancestry that included old lady Depreciated Money, young Dire Hunger, and doubtless also a bit of blood from the Regular Morning Hate family.

It has been definitely established that the guns which are sent to America are the leavings from the trade of other nations. We get Mauser military actions which had been rejected by German army inspectors, and considered too defective by the Allied destroying squad to be bothered with. The barrels that come over are likely to be rough or crooked. Those fine German and Austrian rifles we used to know are going into hands which the unforgiving Deutscher considers less verdant than those of Yankees. Those in the know can tell at a glance by certain details of construction whether a gun is one of the good Mausers or merely one of those made as a dollar trap.

The barrels of two of the three Mausers examined for this investigation were not highly polished, but they did seem smooth and straight. No enlarged pockets were discovered in the bore by the lead plugs used to help in calibrating them.

It must be understood that the cases of all 8 mm. and 7.9 mm. cartridges are supposed to be interchangeable. The bullets are what differ. Chamber dimensions, however, are by no means uniform, and as for bore and groove dimensions, the following twenty-one different combinations are those previously mentioned.

Rifle Group					
No.	Groove In.	Bore In.	No.	Groove In.	Bore In.
1	.3170	.3090	12	.3210	.3115
2	.3185	.3100	13	.3230	.3115
3	.3260	.3103	14	.3235	.3115
4	.3210	.3105	15	.3200	.3217
5	.3260	.3110	16	.3205	.3119
6	.3250	.3111	17	.3209	.3120
7	.3245	.3112	18	.3220	.3120
8	.3256	.3112	19	.3250	.3120
9	.3250	.3113	20	.3204	.3124
10	.3234	.3114	21	.3200	.3135
11	.3264	.3115	22	.3282	.3154

Extreme variation in groove diameter is more than seventeen thousandths of an inch.

The shallowest lands are seen to be three and a half thousandths, in group 1; the deepest lands are seven and a half thousandths, in groups 5 and 11.

The American factory cartridges for use in Mauser and Mannlicher rifles of the two calibers 8 mm. and 7.9 mm. are the following:

	Bullet	M. V.	Energy		Traj.
	gr.	f. s.	lbs.	yd.	in.
Winchester	227	2015	2100	200	6.0
Western	236	2130	2380	200	5.7
Remington	227	2050	2133	200	5.9
Remington	236	2129	2375	200	5.7
Remington	154	2915	3018	200	3.1
Rem. (Spec.)	170	2500	2360	200	3.3

The last cartridge on the above list is fitted with the soft, thin-jacketed bullet mentioned. It will upset enough to fill the grooves of any 8 mm. barrel, as factory loaded. Its accuracy is no better than that of the other cartridges in the list in rifles which fit them, but it gives better accuracy in barrels that are off in dimensions. In rifles known to be true to the original Model 1888 Mauser specifications the regular 236-grain Western, Remington or Winchester ammunition should be used.

It is possible to employ du Pont No. 15 or Hercules HiVel or No. 300 powder to increase the above figures of velocity somewhat. The handloading is ticklish business—very ticklish business, however—where one does not know the exact relation between bullet diameter, and bore and groove diameter.

Midrange loads of Lightning, No. 18, HiVel or No 16 powder, similar to 30-1906 midrange charges, can be worked up with cast bullets properly oversize for any particular barrel, or with the 32-40 jacketed bullet or any other jacketed bullet either suitably soft or of proper groove diameter.

The moral of the preceding paragraphs is that any one already an owner of a bit of this 8 mm. mess can help himself considerably by intelligent examination of his gun and proper selection of factory ammunition, plus a little handloading of practice ammunition. For the person intending to buy an 8 mm., the moral emphatically is DON'T.

It is one thing to make the best of a bad bargain, working out loads which may give satisfaction from a weapon which otherwise would be a total loss. But it is quite another matter to deliberately purchase a piece of junk which is no practical use outside of the gun cabinet except as a horrible example. It is quite evident that the sources which today are flooding the American market are deliberately trading upon a reputation made in the past and which so far as commercial potmetal products of the present are concerned has apparently ceased to exist. However it must be remembered that many shooters of limited means have invested in these bad bargains and in many instances such men can discount their losses by a little intelligent experimenting.

An American shooter who once grasps the facts given here should surely hasten to place his affections on or to buy another rifle. I cannot understand why any shooter should want to fuss around with this botched up 8 mm. caliber, with nothing in its favor except

a few dollars lower purchase price of gun, when the 30-1906 cartridge is so fully at his disposal with such a wonderful reputation of achievement in both target shooting and hunting. Even the supposed low price of 8 m. m. rifles becomes an illusion when one considers that 30-1906 ammunition suitable for practice may be had cheaply by members of the National Rifle Association.

The average shooter does not realize how much better developed our 30 caliber military cartridges are than the loads in such calibers as this 8 mm. Even our popular hunting cartridges are better developed in accuracy and suitability for their purposes. The Western open point bullets of several calibers, the new Remington-mushroom and bronze point bullets, the new Peters expanding protected-point bullets, and corresponding Winchester products provide a wonderful variety. The 8 mm. offers no variety at all—nothing but the old-fashioned round soft-nose type bullets, for hunting. The accuracy of our American cartridges is superb. The accuracy of 8 mm. is always questionable. When it comes to handloads, there are literally a dozen class A bullets available in 30 caliber, and one can obtain loading tools correct in every detail. Tools for 8 mm can be obtained, but they will be more or less makeshift, because only by chance can they be of correct dimensions.

For the 30-1906 cartridge there are at least three strictly commercial or factory-product rifles. To N. R. A. members the regular Springfield rifle with pistol grip stock is available at less than fifty dollars. To any one, the Winchester Model 1895 rifle is available at but little more. The Remington Model 30 bolt action rifle for this cartridge is available at about sixty-five dollars from any dealer in the United States or abroad, and it in itself should be answer enough to anyone's 8 m. m. leanings.

This Model 30 Remington bolt action rifle is not sufficiently appreciated by the public which does not want lever action rifles. In it the 220-grain bullet load will more than duplicate the smashing power of the heaviest 8 mm. bullet. The 150-grain bullet loads will out-speed the highest 8 mm. velocity. The 180-grain bullet loads provide range, power and accuracy not approached at all in any 8 mm. load. As for accuracy in comparison with the 8 mm. targets shown, a 30-1906 target made at 93 yards by Mr. T. C. Barrier is shown. This was made with regular factory ammunition, instead of the specially selected and handloaded cartridges required to make a showing in the 8 mm. The ten-shot group measures just an inch and a half, which is real shooting at approximately 100 yards from the prone position with sling and without rest, and with OPEN sights instead of telescope.

If we were to try using 7 mm. or 280 Rose bullets in the 30-1906, we might be duplicating the conditions of some 8 mm. rifles. Or, at the opposite extreme, the effort to use 32 Special or 32-40 bullets in a 30-40 Krag would equal the 7.9 ammunition in Model 1888, 8 mm. barrels and chambers. No sensible shooter expects results from such loading.

# The Perfect .22 Single Shot Pistol

## Fourth Paper — The Foreigners

By Henry Walter Fry

**S**INGLE shot pistols of foreign make are so rare in this country that a man may live here for years and pay visits to many gunsmiths and sporting goods stores without ever seeing any but those of American make. In the whole city of New York I have only come across a few isolated specimens of European manufacture, and none at all of the English pistol which is the nearest in design and dimensions to the American models. The Webley .22 single shot pistol is an excellent one in some respects, especially in the shape of the handle which, as will be seen in the illustration, is designed on sound and correct lines, of the right shape to fit into the shooter's hand and set at the proper angle and position on the frame. The hammer is small and light, the trigger with a very tolerable curve, and the center line of the barrel well down upon the hand of the shooter. The round barrel, 9 3/4 inches long, is fitted with Patridge pattern sights, and the weight of the pistol, which is

Beside the regular break-open model of .22 target pistol which I have just described, the Webley Co. a few years ago put out a rather peculiar single shot .22 which they called the Semi-Automatic. As shown in the illustration it resembled an automatic in the shape of its handle, and partly also in its working, in that it automatically ejected the shell after firing. There the resemblance ended, for instead of bringing up a fresh cartridge from a magazine and closing itself to be ready for the next shot, it possessed no magazine, remained open as an ordinary automatic does after its last shot, and had to be loaded and closed by hand.

One would think that it should not have been difficult to have made it into a true automatic by converting the solid handle into a ten shot magazine, and to have carried out the mechanical details necessary to its automatic functioning. It would then have been no unworthy rival to the .22 Colt Automatic. But the makers seem to have decided otherwise.

lock. Though there are American hammerless rifles and hammerless revolvers, yet no American maker seems to have felt inclined to put a hammerless single shot pistol into the hands of the country's shooting men. And indeed I doubt whether it would find any great amount of favor with them. The barrels of these Austrian pistols were ten inches long, chambered for the .22 long-rifle cartridge, and with the central part turned down to ensure lightness, leaving a length of about an inch and a half of larger diameter at the muzzle. The handles were excellent giving a firm, solid grip to the hand, even without the aid of the finger spur on the trigger guard with which they were fitted. One of their chief faults was that the design of the lockwork was such that the center line of the barrel was pitched a long way above the hand of their user making it not so easy to maintain a consistently accurate hold as when it is set close down to the hand that is pointing it. So, though finely made and



Fig. 1



Fig. 2



Fig. 3

Fig. 1—Webley's Single Shot .22. Break-open pattern, with locking catch operated by trigger guard.

Good Points:—Medium weight, large, solid, well-fitting handle. Barrel line low down in hand.

Faults:—Poor design of locking catch. Inefficient extractor.

Fig. 2—Webley's Semi-Automatic .22. Made with sliding barrel, automatically ejecting the fired shell after every shot, the reloading and closing of the breech being done by hand.

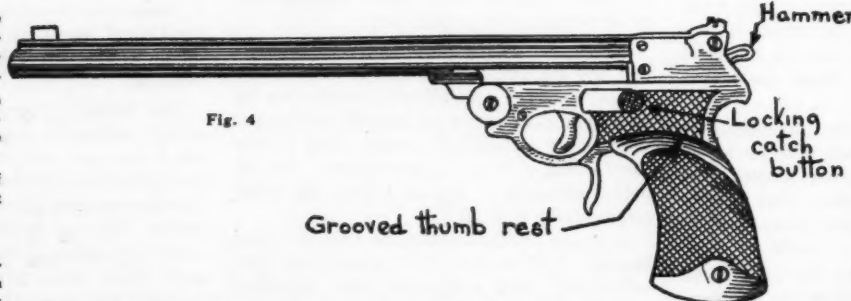


Fig. 4

Fig. 4—The Glarnish Pistol. Break-open pattern, with right thumb press button locking catch, and extractor drawing fired shell clear of cartridge chamber. Good Points:—Medium weight. Good and conveniently working locking catch. Good extracting action. Light, easy-working hammer. Handle of perfect design. Faults:—Barrel is one and one-half inches longer than standard. Retail price in U. S. excessive.

Grooved thumb rest

Hammer

Locking catch button

Good Points:—Medium weight. Excellently shaped handle. Automatic extraction.

Faults:—Moving barrel prevents the achievement of the highest target accuracy.

Fig. 3—Long Barreled Swiss Pistol. Extra long fixed barrel. Hammerless falling block lever action. Set trigger. Elaborately constructed grip.

Good Points:—Rigid barrel. Action allowing of examining or cleaning from breech. Adjustable trigger pull. Well-fitting grip.

Faults:—Barrel too long and cumbersome. Poor extracting action. Grip unnecessarily elaborate.

of the break-open pattern, is just 2 lbs. But the locking catch, which is operated by pushing forward the trigger guard from the inside, is not well made and tends to work loose after a not very long period of wear. The extracting action, too, is not very efficient, and though it will sometimes throw the fired shell clear of the breech if the pistol is opened with a quick, sharp movement, it is more apt to draw the shell only a little way out of the chamber, leaving it to be picked out with the fingers. So that although strong, well made and accurate, the Webley pistol, even were it easily obtainable here, would not be a serious competitor to those of American manufacture.

I never had an opportunity of trying one of these pistols, and no doubt that they possessed a quite tolerable degree of accuracy. But it is not to be expected that a pistol, the barrel of which slid back at every shot should be as easy to make fine groups on the target as one whose barrel remained immovable in its frame. So the Webley Semi-Automatic does not seem to have made any great hit with the shooting fraternity and is now I believe no longer made.

Neither I think, would be the .22 pistols of Austrian make of which I have seen a few specimens here and elsewhere. They were of break-open pattern, operated by an under lever, with double set triggers and hammerless

doubles accurate, these Austrian weapons are not such as would find favor with American pistol marksmen.

The rules of American pistol shooting have, and wisely, I think, limited the barrel length of a target pistol to ten inches, but in Europe there seem to be no such restrictions, and the result is the manufacture and use of such freak weapons as I had the pleasure of examining in one of New York's largest sporting goods stores.

It was of .22 caliber, with a fixed barrel 14 1/2 inches long, and with a vertical sliding block hammerless action, worked by an under

(Continued on page 12)



# Pocket, Pack, and Bureau-Drawer

By F. C. Ness

THE title above defines some purposes to which are put certain Clothes Sackers, Belt Weights, and Holster-ballasts. It also points out that Hip-jewelry is not confined to definite limits of physiology. It is true, that after a fellow has handled handguns for a few years, he becomes prejudiced to a certain extent and forms absolutely definite ideas as to just what should constitute a revolver or pistol adequately filling the bill of a he-weapon. It must be bored and chambered for a certain cartridge, be of such and such a barrel length, have a particular shape and size of grip-stock, and must be so and so as to trigger-pull and sights. But circumstance has its way with us and often places us under peculiar environments, the conditions of which make these erstwhile good qualities of our favorite hand guns objectionable if not down-right impossible. And sometimes, if we are to enjoy the companionship of a gun at all, we are forced to shove by the board such refinements as sighting radii, barrel-time, sweet-pulls, 1000 f. s., and target-handholds, and choose a gun solely and only because it is compact.

Many of these guns are self-defense weapons, primarily, though not all, but they are essentially all abbreviations of our regular handguns, excepting the bureau-drawer variety. We shall take up the latter species first because it is the most common and numerous and for that reason most quickly disposed of, paradoxical as this logic must seem.

Of all the places pistols are worn the most popular among the dear people is the dresser or bureau, with a few library tables horning in. Almost any kind of a gun can be found there, but the most common are cheap five-shooters or seven-shooters, Iver Johnsons, or very likely some antiquated relic brought home by father, uncle, or great-grandfather from some war of the past. Now in fairness, I want to admit that I once owned a special six-shot Iver Johnson that really shot pretty fair. In the June issue of another paper (*Sportman's Digest*) I published a target shot at ten yards offhand with this revolver in which three shots out of a cylinderful hit the pip of the ace of hearts. But these guns will bear no straining of any kind and are easily affected by abuse. I know a wealthy farmer only a score of miles from here who wears one in his bedroom dresser. At first he used it in hog-butcher time but never cleaned it. And now, fouled and rust-jammed, it lies useless among neckties and soiled collars, filling him with the mistaken assurance he has a weapon in the house.

Though not so universal, now, in this decade of motor-camping, we sometimes wish to go light, and at the same time carry our home and furnishings upon our backs. When no other type of fire-arm can possibly be managed, we make the best of it by slipping some compact little pistol or revolver into the pack-

sack. Frank M. Woods solved it with a tiny .25 caliber Colt automatic, known as the Vest-pocket Model. With it on his mountain pack-sack trip, he killed a few of the smaller varmints, even killing one or two jack-rabbits at moderately long revolver ranges. This little gun is flat and has a length over all of only 4½ inches. It is a remarkable little shooter for its extremely short barrel, now, two inches. I have seen quart-bottles shattered successively at twenty-five yards, and the necks shot off at ten yards, with one of these compact little weapons.

Advertising cuts and peeks at the little .25 Mauser in show-cases and store windows impressed me with the superiority of its design over that of the Colt. But it needed only a single trial of both to convince me of the better material, workmanship, and finish of the Colt. The sturdiness of the latter and the looseness of the Mauser makes the foreign gun seem cheap. However, for the purpose outlined above I should choose neither, but pin my judgment to the short barrel Filia—shortest member of that tri-club. To my mind, it is smoother in action, has better handling qualities, and the .22 Long Rifle cartridge it employs is much more effective than the .25 pistol. The flat model 51 Remington pistol, in .32 and .380 calibres comes into consideration for a pack-sack gun. It is half a pound heavier and 2½ inches longer than the .25 Colt and would mean less shots per allotted weight of ammunition, but it is much more effective and is only 9-10 of an inch thick. In the days they were available, there was not a gun more effective per ounce weight than the 6 inch Diamond model .22 pistol, peep-sighted and shot with two hands. It was carried pinned to the lining of the coat, unnoticed by the wearer and unnoticeable to others, and, in the hands of a marksman, was as effective as single-shot rifle up to fifty yards.

Self-defense guns might mean either pocket or holster artillery. But real protection implies one imperative requisite—shocking power. No cartridge worthy of consideration less than the .38 S&W with lead bullet. Even the .380 is perhaps taboo on account of the hard bullets used. The hollow-point .22 N. R. A. delivers a greater shock to animal tissues than the .380, in my opinion. Quickness of draw is also a factor; holster guns were best restricted to 5½ inch barrels, and pocket guns to 4 inches or less.

The longer-barreled variety should of course be carried on the belt or under the left armpit. Some prefer to thrust the butt into the flask pocket of their pants with the barrel up under the vest. Others like to stick the barrel beneath the waist-band in front and cover the handle with their vests when no coat is worn. Captain Hardy, of Colorado, F. A. Manea, of Wyoming, and J. R. Montfort, or Texas, think a special, quick-action shoulder

holster is the proper place and thing; while H. H. Heiser advocates a conveniently-canted belt holster on the left abdomen as the manner par excellence. Each has its own points of advantage, depending upon personal preference. When but a single gun can be owned, these longer-barreled, self-defense guns are probably the only kind, because they are better suited to general usefulness. It might include any gun from a Police Model Smith & Wesson to a sawed-off Single Action Colt.

Taylor, originating in Iowa, I think, was a distant law-relative of mine. I am told he represented the Peters Cartridge Company at live-pigeon meets, also giving pistol shooting exhibitions, and played billiards for the Brunswick-Table Company. Always he had on his person his .44 Colt, carried in a peculiar fashion, dangling from his belt on the end of a lannard attached to the swivel-ring, screwed into the butt of his gun. Supposed to be gifted with uncanny co-ordination between eye and hand, he could shoot effectively without removing it from his belt. He was an inveterate gambler and followed the gold camps and shifting frontiers over the West and northward, becoming one of the first marshals in Nome, Alaska. His peculiar solid-color iridescent eyes and well-known skill with his ever-ready hand gun carried him through scrapes victoriously, and he claimed he never had to shoot a man in all his rough career. Socially, at picnic parties and so forth, he politely concealed the gun beneath the waistband of his trousers. Otherwise it always dangled from his hip like a small boy's first rabbit.

However, in the haunts of polite usages, it is uncomfortable and awkward to tote a holster gun. We sometimes may need a self-defense gun shorter, smaller and compact enough to be carried in our pocket without advertising the fact to the whole wide world. And in this light a gun designed particularly for pocket use becomes ideal. It implies further restrictions than caliber, and barrel length. It must be hammerless, smooth in outline, and have a round or smaller rounded grip, to prevent catching in the clothing. Such a delay, caused by catching in the pocket, could easily prove fatal where the weapon is needed on short notice.

Pocket-lugging has its disadvantages. The gun collects body moisture and rusts. Treated with Corol or Stazon, the rust-repellents rub off on our clothes, and rubber holsters are clammy things at best. When carried in a protecting purse of suede, mocha, or chamois, their intended purpose is defeated, and they become too slow for any real protection. This could be circumvented in some instances by removing the gun from its cover and slipping it into the most convenient pocket upon entering a danger zone. But Chas. A. Gaskill has solved this problem for us with a spring-retaining stiff-backed hip-pocket holster made of cowhide that protects the gun, also the clothes,

and leaves the weapon in a very handy position for quick drawing. This holster makes possible the use of hammer guns, and four-inch barrels, with fuller stocks, since the upper works are carried free.

But I have a pet notion that the ideal way of using a pocket gun, from the standpoint of effectiveness, especially where there is a life to be saved, is from the right-hand coat (or overcoat in winter) pocket. The chief value in this method is the element of surprise. By shooting through the pocket where the hand is casually carried through really gripping the gun ready to fire, you take your opponent off his guard, and the first hit usually decides the issue. Others, practised in the art, can work this same game by unexpectedly producing a pocket gun from their coat sleeve.

And for this most efficient defense of self, no gun can possibly fill the bill better than the Smith & Wesson Safety Hammerless, "New Departure" Model in .38 S & W caliber, and with a three and one-quarter-inch barrel. Smooth in outline with the action covered, it is better than an automatic pistol, and its five shots can be ground out almost as fast with a smooth, double-action pull, while the grip-safety protects the owner against accidental discharge. The barrel length mentioned gives an over-all of seven and one-half inches, which should not be exceeded, figuring from convenience, and the caliber is perhaps also the best combining, as it does, power and compactness. Less would be ineffective, a greater caliber would make it too bulky.

As to shooting qualities, self-defense weapons are intended primarily for placing a solid blow into a big target at very short range in the quickest possible time, and are not ostensibly suited to split-hair shooting. But I have been surprised by the nice offhand work of which some of them are capable, meaning here all short-barreled compactly-built hand guns. The examples within my experience are the following: a .22 Hopkins & Allen, 2½-inch barrel with which I could surely shatter small brittle targets at thirty feet, and with which I managed to kill two fox squirrels the same afternoon; a .25 Colt pistol already mentioned; and a .380 Remington pistol, about which more later. Knowing their limitations there is a lot of fun in trying to puncture targets with this type of arm.

Arthur's uncle runs a county newspaper, and from the editorial sanctum he purloined one of the bureau-drawer kind. It was an interesting member of the Smith & Wesson family, and we hied us out to the city limits.

The gun was of a peculiar long and straight construction, giving it an over-all of 7¾ inches with a 3¼-inch barrel. The 1¼-inch cylinder made the bore length 4½ inches, and the sighting radius was four inches. It was a tip-up model with a top catch, and a raised rib, and was single-action like the Russian model. The hammer firing pin and the floor plate cylinder lock resembled those of the Colt S. A. The frame was solid and equipped with a side plate. The trigger was merely a straight lump unprotected by guard, and gave an abrupt, stiff and rather unpleasant trigger pull. It was bored

for the .38 S & W cartridge, and the cases seemed very loose in their respective chambers. From the cylinder rearward the frame and straps extended ¾ inches to the heel of the butt, giving an unusually generous expanse of metal between cylinder and the shoulder. This allowed for a really good grip for a short-fingered hand, better than the hammerless model of the same make, because the reach to the trigger was shorter, and the pearl handles slipped out of the pocket smoothly and felt good and secure in the hand.

The serial number, 16,599, appeared several places—on the straps, on the cylinder and on the extension of the barrel rib beneath the top-latch. The rib bore the following inscription: "Smith & Wesson, Springfield, Mass., U. S. A., Pat'd Jan. 17 & 24, '65, July 11, '65, Aug. 24, '69, Jan. 19, 1875, Reissue July 25, 1871."

The gun was nicely proportioned, and the well-designed stock and rigid construction gave one a feeling of confidence when aiming it. The barrel catch bore a "U" notch for a rear sight and the conventionally shaped front half-moon was as thin as a knife blade. Although not perfect the bore was only slightly spotted, the rifling remaining clean-cut.

We had along some W. R. A. smokeless, some W. C. C. black powder, with some U. M. C. smokeless for the Remington .380 and some Peters' Long Rifle for the .22 Stevens' Pistol. The black powder ammunition gave quite some recoil in the Single Action S & W, and I caught a picture of Art catching the kick. At twenty yards, groups with both .38 pocket guns averaged 4¼ inches, some of the bigger ones (all five-shot) exceeding five inches between bullet holes farthest apart. From the sitting position, we were surprised that the Remington did not substantiate our experience with other hand guns, because the groups were not reduced materially. The smallest we obtained being five shots in a 3¼-inch ring that day. But the S. A. .38 acted normally to the sitting position, and at twenty yards—five shot with W. C. C. black powder, and five with W. R. A. smokeless gave good results. Outside of one shot held wrong and dropping two inches below the center of the group, the remaining nine shots had a vertical deviation of less than one inch. The 2½-inch lateral deviation was due to the very thin blade front sight in a too generous rear. Ten shots fired for comparison with the .22 pistol (Lord's), scored 86 x 100—three 7's, one 8, three 9's and three 10's—not so good, showing we were a little off form, as we have now and then done better than this offhand with ten-inch Stevens.

Twenty yards is a pretty long range for target punching with short-barreled pocket guns, except in the hands of an expert. In our less expert hands we found ten yards to be more just to the gun. This same day I faced the twenty-yard target at thirty feet with the magazine of the Remington filled (eight shots including the one in the barrel), and fired them all with an unorthodox freeze-hold on the bottom of the "nine" ring within the bull. For rather fast fire (unfortunately no stop watch present) and gun emptied, without

lowering the hand, I consider it a good indication of the shooting qualities of the Remington Model 51 and a credit to the designers of the gun, for it is certainly built just right to fit the shooter's hand and to inspire him with a confidence in his ability.

I also shot six shots with the .38 S & W single action, slow fire this time of course, as I couldn't imagine anyone duplicating the performance of the Remington above with a gun like this slow Smith & Wesson. The six shots were fired at the center pip of the three-spot of Diamonds, all hitting the card (thirty feet offhand) with a 1¾-inch group. With the center of the 2.72-inch black of the short range pistol target drawn over the point of aim on the playing card, we find that all six shots would have hit the twenty-yard bull. Two months and ten days later we fired five shots in the same manner with the Remington, getting three 10's and two 8's.

As to the proper caliber there is, of course, a wide difference of opinion. Our local police force and sheriff are armed with the .32-20. With a hollow-pointed bullet this caliber in the new Rem. U. M. C. speed cartridge develops satisfactory shocking power. Of course, it should be used only in revolvers equipped with heat-treated cylinders, like the latest Smith & Wessons of this caliber. There are others, with the Filipino ineffectiveness of the .38 still fresh in their minds, who consider the most powerful hand gun calibers none too good. Among them the 44-40 and .45 Colt are favorites, and I know of at least one .45 pistol cut down to a pocket automatic.

Personally I have an abhorrence for all .32 and .25 caliber hand guns. I should much prefer to pin my faith to the .22 N. R. A. hollow point for shocking power. For a pack-sack gun I can think of no combination that would be more all around effective than this cartridge in a .22 Colt automatic with the barrel cut down to three inches. For long fingers or long hands it should be ideal. As it is with my abnormally short and stiff trigger finger, it is a draw for the purpose mentioned between the .22 Colt pistol and the .380 Remington, which fits my hand better. For a real out and out pocket gun, if I couldn't for some reason obtain the Smith & Wesson .38 hammerless, short-barreled revolver, I'd (horrible to confess) take an Iver Johnson or Harrington & Richardson .38 S & W caliber hammerless with from 3- to 3½-inch barrel, and keep it in perfect fighting shape at all times. You see I insist upon that hammerless revolver feature for pocket use no matter what kind of a gun I must take in order to get it.

Milady might even slip into her handbag a toy .22 revolver, or that dainty little .35 Smith & Wesson automatic pistol (about the killing power of the .22 short), and be able to find some assurance and comfort in its possession. However, thanks to the red gods, these United States of America are developing more and more red-blooded women of the real outdoors kin and kind, and many of them are emulating their husbands in their firearms and outdoors equipment. Mrs. Gilman goes her husband

(Concluded on page 13)



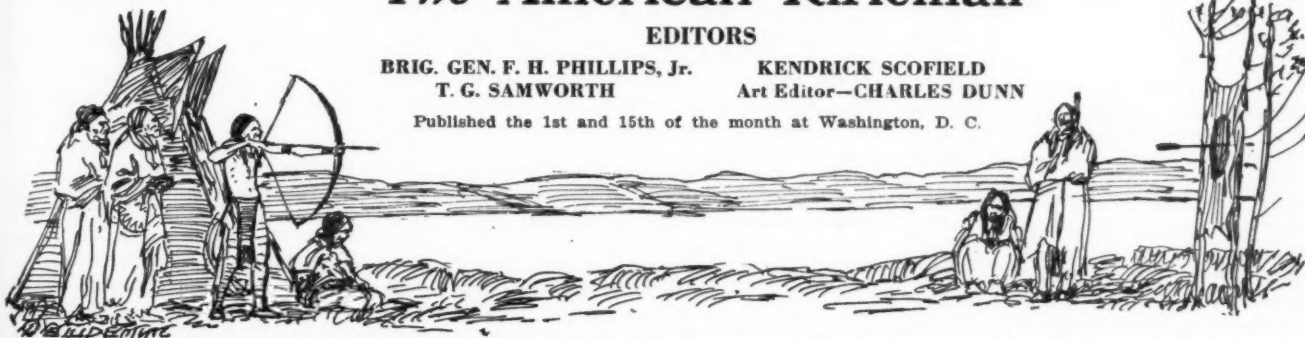
# The American Rifleman

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**I**N OFFERING their varied citizen disarmament laws, supporters of anti-firearm legislation are apparently laboring under the Utopian delusion that the simple act of engrossing such statutes will automatically and permanently place firearms beyond the reach of the criminally inclined.

Unbelievable as it may seem, these reform gentlemen are entirely ignorant of, or, which is worse, see no significance in, the meteoric rise of those dubious gentry, the bootleggers and rum runners. In spite not only of the Eighteenth amendment, but of the drastic enforcement act which accompanied it, and under which vast sums are expended, the "blind tiger," and the rum runner continue to flourish.

This being incontrovertably true it is a fair assumption that in the event of the passage of a law prohibiting the manufacture or sale of firearms a similar condition equally as hard to control as the illegal sale of liquor would arise. The proposal to stop the sale of pistols at its source by prohibiting manufacture is futile and childish, since the Spanish, Hun and Belgian factories will continue to produce cheap murder guns as long as there is a dollar of profit in the deal; so consider in detail the factors which would favor "pistol bootlegging."

First, there would be a ready market, perhaps not so large as that for illicit liquor, but still sufficient of a demand to make profitable business, since a single weapon under those conditions would bring to the vendor a price comparable with that of a case of liquor today. Second, a pistol can be concealed easier than a quart of liquor and could be brought into the country, transported and distributed with less risk than is now taken by the bootlegger. Third, there is no hope that the federal or state governments would provide enforcement funds, or, if they should, that this machinery would be any more efficacious than the present enforcement.

As for municipal and state police, they cannot be depended upon to evince any greater activity in running down pistol bootleggers than they have with liquor bootleggers. In fact, they are in almost every community now armed with laws under which pistol carrying can be quite effectively discouraged if maximum punishment already provided is imposed by the courts. The present laws of course apply largely to the possession of firearms by criminals or for criminal purposes. Any extension of these laws would accomplish nothing except turning the police, or whatever enforcement agency might be provided, loose upon the law abiding weapon owner.

The "pistol toting" citizen, once frequently encountered, is

today a rarity. It is even difficult to convince such as bank clerks, and company cashiers that in these days of banditry the only safeguard against highway robbery is to know how to shoot and when to shoot and to go armed. On the other hand, the pistol toting criminal is still with us and likely will continue to be until he is discouraged or exterminated either with hot lead or a long jail sentence.

That this is true is becoming more and more apparent to the clear-thinking and normally law abiding citizen. To deprive this type of man from legally owning a weapon will be to drive him, as well as the criminal, to the pistol bootlegger.

\* \* \* \* \*

**M**OST decisive victories, whether in war or sport, are won before the contest starts. Half the battle lies in the knowledge that some one of the contestants is equipped to win. The other half is the will to win. What is left is usually a series of more or less spectacular details which have their being only as the result of the more prosaic groundwork on which they stand.

When the full tale of equipping the 1924 teams is told, with a narrative of the minute attention to details of stocking, sighting, and fitting accessories to the 1924 rifles, it will be apparent that the selection of super barrels, while of the utmost importance, still was but part of a preparation designed to leave no doubt in American rifleman's minds that our representatives in France need make no apologies for their weapons. In arranging for the manufacture of these barrels, however, there was set in motion machinery which produced rather astonishing results.

A score of years ago half a dozen firms specialized in the making of match barrels. But between then and now, there fell a hiatus during which time not only the interruption of war but a general though temporary decline of interest in free-rifle or Schuetzen work resulted in practically no strictly match barrels being turned out by most of the big companies. That this highly specialized and skilled work could have been resumed almost overnight, is in itself noteworthy. That any given number of barrels could be selected which, when fired from a machine rest, would give accuracy surpassing that of Mann barrel tests is even more of an achievement.

Without in the least detracting from the splendid skill and morale evidenced at all times by the teams representing the United States, it is small wonder that with such one hundred per cent co-operation from the nation's gunsmiths we continue to put winning teams in the field.

## Selling to the Big City

(Concluded from page 4)

It is conceivable that a rifle club might stage a very successful smoker listing as attractions boxing and wrestling bouts, an act or two of vaudeville, and similar conventional attractions, but it is doubtful whether such an entertainment would be of much assistance in selling rifle shooting to the community. It would probably add to the club funds, but not to the club membership. The fact that the New York Central smoker drew a full attendance is evidence enough of the interest in the rifle shooting game among the average American citizens.

As a backstop for the actual shooting events, three boxes of sand were used. These boxes were four feet six inches, by two feet and one foot deep. Two of the boxes were placed on end, side to side, and the other box laid on top on its side, with boards on the face of the boxes for fastening targets. The visitors were made comfortable by the provision of checking facilities for their hats and coats, and any "excess packages." Targets were arranged around the walls in regular order, from the fifty foot gallery target up to the two-hundred yard decimal and C5. There was an ample supply of spotting scopes, so that the strangers could watch the bullets go in. Tables were arranged with an assortment of rifles, revolvers, pistols, and automatic pistols of every description which could be gathered from a bunch of shooters of the rapid type available in that neck of the woods. Carl Fredericks loaned his collection, including a number of guns picked up or made for him in Europe after the continental idea, with hand-made stocks and set triggers. There was a splendid array of the best products of that famous producer of super-accurate barrels, Harry Pope. There were Springfields of every description, from the new .22 to the heavy barrel. An assortment of telescope sights and spotting scopes were also there. So much for the mechanical side of it. For the physical comfort of those in attendance, corn-cob pipes and individual packages of tobacco were furnished at the door.

With the pipes all lit and the light-blue haze beginning to form, the exhibitions got under way. Mr. L. A. Robinson, who is normally a rifleman and big game hunter, and subnormally Passenger Traffic Manager for the New York Central, opened the ball with an exhibition of rapid fire offhand work, with a light Remington pump gun. Mr. Louis Maurer, billed as "ninety-one years young" came down to the smoker after two week's illness, and put on an exhibition of offhand Schuetzen work, which went over big with the audience.

Fredericks went on next. Beginning with an exhibition of the various small arms on the table before him, he related history and anecdotes as he proceeded. According to Mr. Martin, "his good humor was without limit, and he was more in his element than I have ever seen him before. In instructing, in aiming and trigger squeeze, he assumed the most ludicrous attitudes one could well imagine. He

took up over a half-hour, and had the audience on their toes every minute."

Harry Pope had been listed as the next attraction, but illness kept him away. Mr. Joseph Bauman then gave an exhibition of the Swiss style kneeling position. Without the use of the sling, he put on a 98 kneeling, and made a great hit. This exhibition was staged as being of particular interest to hunters in the audience who might get down into this position, without having time to shoot prone, or tie themselves up with a sling.

Jack Hession then put on an exhibition of real naildriving marksmanship, by shoving the horse-shoe nails through the backstop, exploding .22 calibre cartridges stuck in holes in the backstop, splitting visiting cards, etc. Martin claims that Hession's success in pulling the latter stunt was due to the dexterity with which he, Martin, holding the card between his fingers, shoved it in the way of the bullet as it came down the range.

Mr. Manville then explained and demonstrated the mysteries of getting rapid fire out of a Springfield by a left-handed man. He used dummy cartridges, of course. This stunt is always interesting, even to the old-timers in the game.

The success of an affair of this nature is intimately tied up with the ability of the performers to not only "strut their stuff" successfully, but to keep up a running fire of repartee meanwhile. If it so happens that any of the performers who are greatly to be desired, because of their ability, cannot carry out the latter part of the program, and this is quite frequently the case, someone else of the entertainers must be designated in advance to act the "court fool" meanwhile.

The session opened about eight o'clock, and kept going in rapid fire order until eleven. That is another point which must be borne in mind in planning similar programs. Don't drag them out to the point of tiring the audience. Bear in mind that the average theater program is about two and a half hours to three hours long, and the performers are, presumably at least, experts in their line. You cannot expect your amateurs to hold the interest of their audience for a longer period than that.

We are at this time in the midst of the winter's shooting program and in the midst of the annual round of smokers, theater parties, and social events. This is the opportune time to put on a Boosters' party of whatever description may appear most applicable to the requirements of your community.

Preliminary planning and publicity must occupy a minimum of two weeks, so there is not much time to be lost. Though your attempt add fifty per cent. to your club membership or none at all, it will at least advertise the club and the shooting game to your community. It is, therefore, an attempt worth making and one which, directly or indirectly, is bound to bear fruit. Any further delay will mean postponing the matter until next year. So, to use the words of one ambitious commercial enterprise which has been successful in selling a commodity to communities all over the United States, "Eventually, Why Not Now?"

## The Perfect .22 Target Pistol

(Concluded from page 8)

lever from the toe of the butt. It was fitted with a set trigger operated by a lever at the left-hand side of the action, and a safety lever on the same side. But its most noticeable feature was the grip, which was a most elaborate affair. Certain American pistols, as I have shown, have the fault of being fitted with grips not suited to the human hand, but in this one the fault was in the other direction. Not only was there a deeply grooved projection on the left-hand side to accommodate the shooter's thumb, and a finger spur on the trigger guard for his second finger, but projecting out from the right hand side of the toe of the butt was another deeply grooved piece of wood in which rested the under side of the hand, between the wrist and little finger, so that it was something of a small feat in gymnastics to fit the various parts of the hand into the various curves designed for them in order to get a proper grasp of the handle before firing. But even then, with these artificial aids and supports, it would need a person of considerable strength to fire a series of shots of any length with this long and unwieldy arm, and the average man would, as a rule make better shooting with his ten inch medium weight American pistol and 2 lbs. trigger pull than with this Swiss made weapon with its extra barrel length, set trigger and artificially elaborate handle.

Though some of the pistols that I have described, the Wurflein, two or three of the models of the Stevens, and the Smith & Wesson, may, by certain judicious alterations, be made to conform nearly to the ideal of the Perfect .22 Single Shot Pistol, yet as turned out by their respective factories, none of them can be said to satisfactorily achieve that particular attainment. That honor has almost been released by a pistol of Swiss design and manufacture which I had the pleasure of handling in one of New York's principle sporting goods stores. The .22 Glarnish pistol, for that is its name, has certain resemblances to the Smith & Wesson, but is its superior in this, that it has as a whole been designed for what it is and is not an adaptation from a wholly different type of weapon. Its light, slender barrel, stiffened by the hollow rib on top, is very like that of the Smith & Wesson, but has a point of superiority in the finely matted flat top, which ensures that when used in the open in bright sunshine there shall be no reflection to trouble the shooter's vision in aiming. The extractor is an excellent one and resembles that of the Smith & Wesson in that it draws the fired shell clear out of the chamber. The hammer, as shown in the illustration, is a thin loop of steel, and is the smallest and lightest that I have seen on any pistol and the fall of which could not possibly disturb any shooter's aim. The trigger has a good inward curve well fitted to take the human forefinger, and the lock is unique in that the trigger pull, by the turning of a screw, may be regulated to a nicety to whatever strength or lightness the shooter desires. In other makes this has to be done by taking out the trigger and shaping the point on a fine



oilstone till the desired amount of pull is attained, by no means a job for any but a skilled and experienced mechanic. The locking catch is operated from a push button by the right thumb without moving the hand from the firing position on the grip, the only other pistol which has its catch worked by the right thumb being the Wurflein. The .22 Glarnish pistol is of moderate weight, beautifully balanced in spite of its 11½ inch barrel, and is fitted with sights adjustable for both vertical and lateral deviation. But its distinguishing feature, that which places it in a class entirely by itself is its grip, which while perfectly suited to the human hand is not disfigured by the artificialities of the other Swiss made pistol that I have described. There is no doubt that it must have been carefully thought out and designed by someone who realized just what the requirements of the grip of a single hand arm of precision actually are. Its shape is admirably suited to the shape of the human hand, curving back at the top into the part between the thumb and first finger and with a grooved projection on the upper left hand side for the thumb to rest in, while the second finger can be placed either on the finger spur on the trigger guard or in the curve of the frame just behind it. The grip is of walnut, finely checkered, not with the coarse cut checkering of handles turned out on the quantity production system, but with the close, fine cut work of skilled and experienced craftsmen. It is to be regretted that the pistol which comes the nearest to our standard of perfection for the .22 single shot should be of foreign make and design, but it is not at all likely at any time to be a serious rival to our good American weapons. The retail price of seventy-five dollars can be amply guaranteed to prevent that.

Though the shape and design of the Glarnish pistol are, in my opinion, superior to any other, with workmanship and materials of the very highest quality, yet in three points it falls short of absolute perfection, and that is, after all what we are seeking for. First, the barrel is 1½ inches longer than the ten inch length which is the minimum in which the charge of the .22 long-rifle cartridge will properly burn and the maximum which is allowed by the rules of American pistol clubs; second the extractor should kick the fired shell clear of the chamber, not merely draw it out and drop it; and thirdly the price should be within the reach of the modest means of the average pistol enthusiast. If, in addition to its present admirable qualities, it had these three as well, we should have our Perfect .22 Single Shot Pistol.

## Pocket, Pack, Bureau-Drawer

(Concluded from page 10)

one better and uses an automatic pistol one size bigger than does C. L.

In view of all this anti-pistol propaganda promulgated by hectic reformists now going its rounds, this, my creed, may seem somewhat audacious. But I have stirred up some stink (pardon the term) on my own part, and have been not a little gratified by results obtained. Conversations adroitly directed to a convincing

conclusion, cigar-store and street-corner groups discussing my newspaper communications, and favorable replies to my letters from State and national legislators have been some of the fruits of my agitation, and I shall be keeping on "keepin' on" fighting the injustice, the un-Americanism, and the imbecility of the crime-control methods advocated by the misguided, until we win, or until the last gun has been taken from me. Liberty can be safeguarded only through eternal vigilance, and this can be no truer than in its application to the Fourth Article of the Constitution.

With a momentum-gathering crime wave of holdups, murders and daring daylight robberies sweeping the country it is scarcely compatible with even feeble common sense to relinquish now our heritage as a nation of gun men. At least, methinks that those in the vicinity of Chester, Illinois, who were fortunate enough to have either a pocket, pack, or bureau-drawer weapon in their homes or upon their persons at the time of the recent asylum delivery of a score or more of blood-thirsty maniacs were inexpressively comforted—yea, and everlastingly impressed with the real worth of a hand gun and realized what a great blessing it is to have some adequate means at hand for protecting themselves, their beloved and the helpless.

## An Analysis of Game Bullets

(Concluded from page 3)

velocity of about 2400 feet per second. A rifle using such a cartridge can be made relatively light, it will not have undue recoil, and the trajectory will be flat enough to minimize the errors of estimation of distance. As yet we have had no experience of our own relative to the killing power of such a bullet, but happily there is more than ample evidence to this effect from other sources as will be shown in a subsequent paper. Indeed the evidence is overwhelming that such a bullet is far superior to anything that we have been using in this country. Most happily two of our large cartridge companies have come to just the same conclusion, and our next shooting season will find us with at least three cartridges which will carry out all the principles I have tried to point out herein. In fact one of these bullets has already been produced, and others will be ready before the next shooting season.

(To Be Continued)

## Pistol Shooting as Done by Uncles

By Gy-Sgt. John M. Thomas

THE achievements in pistol shooting of A. P. Lane, Doctors Snook, Calkins, et al, are nothing when compared to the handgun history made by Uncles.

One fellow said his Uncle, who was a Texas Ranger with station at Mission, Texas, could

circle a tree, at a distance of twenty yards, and while riding at the extended gallop, would fire one shot at the tree on each trip around until six shots had been fired in this manner; invariably upon examination of the tree the six bullets would be found in the same hole, one on top of the other. However this most excellent pistol pointer was later seen competing in a pistol match, fired slow fire at twenty-five yards, with the result that spectators were unable to determine if his efforts were directed towards making hits on the target, or merely trying to cut new holes in his shootops for the laces to fit in.

Another said his Uncle was a fine shot with a shotgun over the trap, but on one occasion, had grown tired of trap shooting, and, pulling out his single action caliber .45 revolver, proceeded to break better than an average of four out of every five birds at unknown angles while shooting from the hip. The man telling this tale further stated that his Uncle had never fired the revolver at clay pigeons at the known angles, but as sure Uncle Bill could have broken all five birds regularly. At this point one of the listeners piped up: "At what distance?" and was informed that the birds came out of the trap at sixteen yards, to which he showed his contempt of the whole thing, by exclaiming: "Who the h— couldn't hittem at s-i-x-t-e-e-n yards."

Still another, after holding an I. W. Harper bottle bottom up and at an angle of about twenty degrees from the perpendicular, elucidated as follows: A bunch of his folks was trying to dehorn a bull, that was so wild they were unable to catch him in their corral; this bull was pretty wild, but not so wild as the one thrown by the narrator. His Uncle however was equal to the occasion by drawing both guns, and shooting from the hip, from the sitting position, emptied both guns, with the result that both horns came off, but not a smooth job, you understand, but it so tamed the cow's husband that they were able to catch the bull and smooth off the rough edges with a saw.

The following was heard in the Colt's tent at the National Matches of 1922, though at the time it was not mentioned that this fellow was anyone's Uncle in particular, still it sounds like it: Now it seems like out near the Windy City, they have a fellow who has gotten position down so fine, that he can get in his cellar, get all aimed in, on a price tag, which is about one inch in diameter, and is forty feet from the firer; when the shooter gets all set, he returns his pistol to the holster, has someone turn out the lights, he then draws his trusty gun, and guided only by sense of position, fires five shots, the lights are then turned on, and there is always four of the five shot holes in the tag.

It is a funny thing, when you go to Texas, some fellow will tell you of an Uncle of his, who lives in Arizona that can do a stunt like those mentioned, then when you get out in Arizona inquiring for this bird, you can't find him, of course, but a fellow there tells of his Uncle, who lives in New Mexico, who can perform a better stunt, and proceeds to tell you about it. These Uncles always stay one jump ahead of you.

## That Said Background

By "Ted Allen"

**T**ODAY after friend Wife got through giving the daily Bladder the once over I took my turn at the bootleg and society scandle. First thing I casts my peeper on is how one Stokes is having a heck of a time getting himself a fresh wife, or getting rid of a fresh one, I didn't read which. Then there was all about the terrible third act of the German Mark and the wonderful success it was having in producing a self made bankrupt out of the ex-Kaiser's realm. But the main thing that caught my eye was the sad tale of how a bullet, fired a mile away from some guys high powered rifle had busted through the window of a house in town. Nuthin happened except that it scared the old dame into another years advance but believe me old kid the thought of that bullet plinking through the old glass and onto the floor set me dome to revolving.

I'll tell the world that the worst thing in the world is a ricochet that lands. Take it from me Pal only a few land and several of them smash into some old cluckers female bovine, but every now and then Kid one of them lights on a human and then believe me it is a sad landing. Every guy who shoots a rifle should keep his eye on the background. Blazing away with any old slug slinger into the vast beyond is sure to bring results sooner or later. The geezer who always sets his tin can up against a rock is flirting with sister Trouble and the old dame will sure see you wink some of these times.

Say feller did you ever have one of them wild singing pills land? Well believe me one time I run a close second to having it happen. Twas thisaway. I was out in Nebraska visiting a gink I uster know back in Brooklyn. His rich uncle had hied himself out there an got sunk in that swell land and called for the kid to come and resurrect him. Well one day I and him went out shooting. We had an old .32-40 black powder curve cut shooting 185 grain bullets made of lead, lead, lead as the kids say. Well kiddo we got a lot of huntin but had to end up shooting at them gophers, that look like woodchucks and what they call Parry Dogs.

But man O, man theys sure hard things to hit. Also out there on every dogoned hill theres a one by four shack what they calls a house and generally about a dozen kids in it. Well guy we got to shooting near one of these here things and one of them old lead sinkers just sung Barney Google as it sailed off over that hen house. I'll tell the world I thought it hit it and was sure it did when a wild irishman came arunnin' out of the door like mad. Say boy but that gink was mad. Down the hill he came arunnin' and a cussn'.

Us blokes jest stood our ground in fact I and him went forward to meet the Old Dear. Well take it from me guy I was scared stiff and stood there and took it all in as that old guy laid us out. That there slug hadn't hit the cussed shack but sure as your life it hadn't missed it much. We talked the old geezer out of it and waved a fond farewell and beat it for home. That said experience come near spoilin shooting fer me. If that old slug had a killed one of

em it would a been our fault just the same. I and him wasnt looking at the background and its a wonder we aint both beating rock with a sledge right now, for believe me old timer thats too good for a guy what aint got no brains.

But say feller cut out your joking fer I've got to beat it. This ricochet business is a damned serious business. Stick your radio catcher my way and listen, dont you never shoot a rifle nowheres, not even a gat, unless your wise onto where the bullets goin. This here world's full of fools but Old Dear theres a lot of good humans too and if you ever let a slug slide off wild it would be sure to hit one of the few. Take it from me Bo and be careful, Keep your eye on the background.

## Bullet Seating

By B. H. Flowers

**T**HE reloading game is a very fascinating study in all its fine points. But after some three years of experience, the writer has never been entirely satisfied with the results of his efforts until just recently when he devised a satisfactory method of properly seating .30-60 bullets in their cases without producing lop-sided necks or badly distorting the straight line appearance which a perfect loaded cartridge should have.

The remedy for the above trouble is very simple indeed and consists of the use of two sizes of expanders. In seating .308" bullets it is always necessary to first resize the necks of the shells in the neck resizing die which accompanies all makes of tools. The next operation is to expand the neck of the shell full length back to size .306" with an expander of that size. It is at this point where the trouble occurs when seating the bullet, owing to the fact that the neck is two thousandths of an inch smaller than bullet diameter and the metal offers too much resistance when seating the bullet. So the .306" expander is then removed from the tool and a .308" expander inserted. The cases are then run through the tool again, expanding the mouth of the shell to the depth of from 1-16" to 1-8" to size .308", thereby relieving the resistance and allowing of easy seating of the bullet. By this process any type of bullet is not only easily seated in the mouth of the shell, but when it comes from the tool in the completed cartridge, the bulge is not all on one side of the neck but very uniformly distributed on both sides. It is also unnecessary to chamber the mouth of the shells.

When seating cast bullets of .311" diameter a slightly different method is followed. After resizing with the neck resizer, it is then necessary to have at hand both .310" and .311" expanders. The shells are expanded full length with the .310" expander and then re-expanded with the .311" expander to the depth it is desired to seat the cast bullet. This method when properly executed prevents the bullets, through accident, from becoming jarred back into the body of the shell, thereby necessitating the discarding of that particular cartridge, as it is impossible to extricate the bullet therefrom. The bullets are also seated easily without deforming the base or scraping the sides. It is not necessary to seat oversize cast bullets friction tight and the accuracy of same is improved by not so doing.

## A Combination Gun

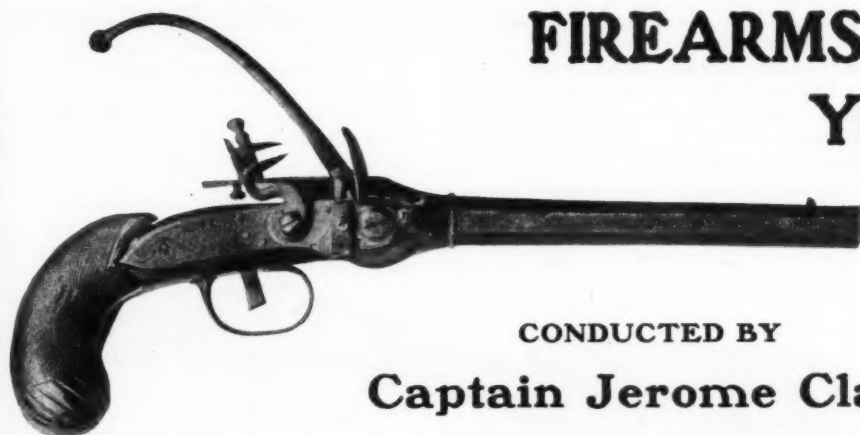
By Chas. B. Barton

**I**N the October 1st issue of the AMERICAN RIFLEMAN there is a communication published under the heading "A Combination Gun." It happens that I have built such a combination and it might interest S. F. S. to know how I did it and what success I had.

I wanted a shotgun and rifle combined and I wanted an accurate rifle. I wanted a fairly light gun and I chose a 20 gauge Fox Sterlingworth 28-inch barrel. I bought three Krag rifle barrels and took the best one of them to install in the shotgun. I first made a sulphur cast about a foot long of the chamber end of the left hand shotgun barrel, cut off about an inch of the chamber end of the rifle barrel and then had the rifle barrel turned down till it was slightly larger than the sulphur cast. The rifle barrel was then carefully fitted to the smooth bored tube the final fitting being done with a grinding compound. A flange corresponding to the head of a 20 gauge shell was left at the breech of the rifle barrel and the muzzle of the rifle extended beyond the shotgun about one-quarter inch. The difference between the outside diameter of the rifle barrel and the inside diameter of shotgun barrel at muzzle was about .005. The end of the rifle barrel was threaded and a knurled tapered nut screwed on the end to center it and hold it firmly. The fit at the breech was so good that it took considerable pressure to insert it, well oiled of course. I procured another extractor, had the left hand extractor built up by welding and then turned for the head of the Krag shell. I then sent my barrel to Neidner and had it chambered, advising him that I should use 170 grain Winchester 30-30 bullets. I bought of the Lyman people a low caterpillar bead front sight and attached it with screws. I installed a fixed, rather large aperture rear sight to the shotgun rib at breech with some lateral adjustment. I was not looking for an extra powerful load as I was afraid that the action might not handle it safely but finally settled on 35 grains of Dupont No. 16 and the 170 grain 30-30 bullet or the 172 grain Newton bullet. I think that with the Krag shell I probably get between 2,000 and 2,300 foot seconds velocity which is plenty powerful for deer. The rifle has proved one of the most accurate ones that I own, and gives me just what I want. I use the gun early in hunting season with two shot barrels and later on in the deer season, I insert the rifle barrel and do my general hunting with it. I think that I have enjoyed it most in hunting white hares. When they are running you can send a charge of shot just ahead of where you saw them last and when you see one sitting a shot at his head with the service bullet and 16 grains No. 80 is best.

Deer are fairly plentiful where I hunt and I don't like to shoot mine before November, but the man who roams the woods with a shotgun is apt to see the "biggest buck he ever saw" and it gives a comfortable feeling to know that you have something for him in case you meet him. I ran across one three years ago while out with this gun after partridges that weighed 251 pounds after I got him out and it took four days to do it, but that is another story.





# FIREARMS OF YESTERDAY

A Department  
For Collectors

CONDUCTED BY

Captain Jerome Clark

## Notes on U. S. Muskets

By Major Charles C. Foster

*He who desires to collect firearms first of all must understand his field and the scope of his subject. It is with this in mind, as well as for the purpose of collating what the collector of experience already knows but has never before had in reference shape, that "Firearms of Yesterday" will publish a series of discussions upon different types of American arms.*

*The present offering: "Notes on U. S. Muskets, by Maj. Charles C. Foster, has been selected to inaugurate this policy. Few, if any, collectors of American military arms are better fitted to present authoritative and accurate data on United States muskets than is Major Foster and his co-operation in this work is a distinct and signal acquisition.*

THE EDITORS.

**F**IRST, what is a musket? I shall restrict the term to the smooth-bore infantry weapon. Second, what is the first musket which can be properly called U. S.? Of course the Committee of Safety arms made in 1775 for the Committees of the several States, antedated the term U. S.; but, as they were the first arms made for any constituted American authority and issued by them to regularly organized American troops—all troops previously raised in America having been British Colonials—I think they should be included.

Each State Committee issued its own specifications, usually calling for little more than a serviceable weapon carrying an ounce ball; sometimes the length of the barrel was prescribed. The locks were practically all imported, and the guns usually had no bayonets.

My own specimen, one of the 35 made by Kinder for Pennsylvania Committee, has a barrel 42 inches long bearing early Birmingham proof marks, is stocked with curly maple, an exclusively American wood, and is trimmed with brass. The musket made in Pennsylvania and marked C. P. has been described by Major Clark. The Minute Man usually provided his own weapon, the family rifle or fowling piece.

When the Revolution began the French Government sold us, through several dummy firms, a great many of their regulation muskets of current and earlier models; and these formed the bulk of the arms used during the war. Of these the model of 1763, often called the Lafayette Musket, was of most interest to us, and was chosen to be the pattern for our own first Springfield. It was a slender, graceful piece, with a barrel nearly 45 inches long, of caliber 69, and marked on the lock plate "Charleville"

in small script. A few were made at St. Etienne. The hammer was of the reinforced type, much stronger than the old goose-neck pattern. The bayonet was short, only fifteen inches in the blade, and of course had no locking ring, which did not regularly appear on our guns until the model of 1842 was adopted.

During and after the war many guns were made by contractors, especially for the militia, usually copies of the Charleville. I have one with the following marks; across the rear end of the lock-plate 1789, and above the U. S. in small letters forward of the hammer a small spread eagle holding in one claw a palm branch, and below U. S. in small letters; on the rear end of the barrel, in order from the muzzle U. S., a small oval, V, and on the tang V. In the oval are what seems to be a small eagle's head and the letters C. T. What do they stand for? Are they inspectors' marks or was the gun perhaps made for Connecticut? It was later used in the Woburn Mechanic Phalanx, a company of the Massachusetts Militia. No maker's name appears.

The first regular U. S. model was that of 1795. It was a close copy of the Charleville, long and slender, with a barrel 44½ inches long and a bayonet 15 inches long, caliber 69, markings as follows; across the rear end of the lock-plate, in a curve, Springfield; in front of the hammer a spread eagle and below this U. S. in script. Proof marks on the rear end of the barrel P, eagle's head, V, and opposite the V, U. S. On the heel of the lock-plate is the date.

A Harper's Ferry piece has the following marks; across the rear end of the lock-plate Harper's Ferry—divided on two lines—and

below it the date, and in front of the hammer a spread eagle much larger than than on the Springfield. Other marks not decipherable.

In the model of 1808 various small changes were made. The barrel remained the same length, but was a trifle thicker; the bayonet was made 16½ inches long; the sling swivels were held on by screws instead of rivets; the hammer was a trifle thicker, and the upper limb of different shape, nearly straight at the back, whereas that of the model of 1795 shows considerable curving; the bottom of the pan is rounded, instead of showing three flats; the battery, or frizzen, is different, the forward limb being straight instead of curling upward. The lock-plate is 6¾ inches long instead of 6¼ inches. The marks on the lock-plate are, at the rear of the plate horizontally the date; in front of the hammer at the top U. S. in script, in the middle a spread eagle, and below Springfield in small letters, in a curve. Proof marks are P, eagle's head, V. The date is also shown on the heel of the butt-plate.

Of the contractors of this period the most interesting was Eli Whitney, of New Haven. He was the first man in the world to make muskets on the principle of interchangeable parts, which system North used at about the same time in the manufacture of pistols. Some of Whitney's guns were marked "N. Haven" in a scroll with an arrow; others were marked Whitneyville.

During the War of 1812 a shorter pattern, with barrel thirty-nine inches long, was issued for artillery and mounted service; in other respects it followed the current model.

In 1818 an interesting device was tried, a self-priming lock. The powder magazine was a brass box, fastened to the front of the lock-plate, and running under the pan; the bottom of the pan was a rotating charger, much like that of the Ideal measure. When the hammer was cocked an arm reaching forward from its lower end actuated the charger, and deposited a priming charge in the pan. When the gun was fired the flash from the pan naturally leaked into the magazine, and this exploded with such frequency and effect that all the guns made, except four or five at most kept as specimens, were ordered broken up as dangerous.

Until the invention of the thin-walled elas-



tic brass or copper cartridge the history of gun making is full of attempts to make a gas-tight joint between two metal surfaces. If close enough to be anywhere near gastight it clogged after a few shots; if not it leaked and spit badly.

The model of 1822 was very different from the preceding ones. The barrel was shortened to forty-two and one-fourth inches and made considerably thicker, as was the stock, also. In fact the whole gun was far stronger and more sturdy. The bayonet was again lengthened to eighteen inches; the lockplate was made thicker, but thinned and slightly rounded at the rear end; the hammer was rounded instead of flat; the shape of the battery was changed; and the pan was made of brass. The marks were: across the rear end of the lockplate "Springfield" divided on two lines, and below it the date; in front of the hammer a spread eagle and under it "U. S." in ordinary type. The date was also stamped on the tang. Proof marks on the barrel, "P", eagle's head, "V". Some of this model were issued with brown barrel and bayonet. From time to time "model" guns were made, every part of which was as perfect as possible and was stamped by inspectors. These were furnished to contractors as patterns. This was a most excellent gun, and was used until the percussion model of 1842 was adopted.

Between 1830 and 1840 the percussion system was studied, and many experiments made. Flintlock arms were converted to percussion in several ways; first the touchhole was plugged, and the nipple screwed into the barrel; second, the touchhole was enlarged, and a cylinder screwed into it, into which in turn a nipple was set; third, a lump was forged onto the barrel over the touchhole, and the nipple set into it. This method was the one commonly used. After the adoption of percussion many muskets were so converted.

At this time Ward's priming hammer was invented and tried. Contained in the upper part of the hammer was a roll of narrow paper tape, studded at regular intervals with a little lump of fulminate. When the hammer was cocked a ratchet pushed one of these lumps into position between the head of the hammer and the nipple. The same idea was tried on the model of 1855; but the roll was held not in the hammer but in a box on the lockplate. The plan failed for two reasons, first in wet weather the tape was soon ruined; second, in dry weather, though the fulminate exploded properly, pieces of paper were often blown into the nipple, plugging it and causing the gun to misfire at the next shot.

In 1830 the first West Point Cadet pattern was issued. This was made by utilizing the stock and lock of the model 1817 rifle, and fitting to them a brown *twist* barrel, thirty-six inches long, of caliber .54, to take a half-ounce ball. This was a very light and handy little musket, and must have been a godsend to the Cadets, most of whom were then mere boys.

The so-called model of 1840 was simply a model 1822 flintlock converted to percussion and then rifled and sighted for the Minie bullet, recently invented in France.

The model of 1842 marked the official end

of the flintlock, though contractors still made belated deliveries of the older model. I have seen contract flintlocks dated as late as 1847.

This was the first regulation percussion musket. It had a barrel forty-two inches long, and a bayonet eighteen inches long, with a locking-ring. The lockplate was six and one-fourth

every way than the Infantry pattern. The markings were the same. The Artillery pattern used the regulation Infantry bayonet; the Sappers' pattern had a curious swor bayonet which was attached to the right-hand side of the muzzle; the Cavalry pattern had no bayonet, but had a sling ring which ran on



No. 1—Is the Charleville, about five hundred of which were acquired from France in 1777-1778, were counterstamped "U. S." on lock and barrel.  
No. 2—Is the copy of the Charleville made under contract in this country in 1789.  
No. 3—Is the Springfield copy of the Charleville or regular model U. S. musket 1795 made at Springfield Armory.

inches long, flat, with beveled edges, and bore marks as follows: across the rear of the lockplate "Springfield" divided on two lines, and below the date; in front of the hammer a spread eagle, and below "U. S." in plain type. The heel was also stamped "U. S." The date was stamped on the tang. Proof marks on the barrel "V", "P", eagle's head, in smaller type than on earlier models.

This was a particularly good gun, indeed, it was rated as the best made musket in the world. Some were rifled and sighted for the Minie bullet, but never adopted as regulation.

A Cadet pattern of this model was made, having a barrel forty inches long, of caliber .54, and a bayonet fifteen inches long. The lockplate was five and one-fourth inches long, and the gun was made much slenderer and lighter in every way than the Infantry pattern. Markings were the same as on the regular model.

A musketoon was also made for Artillery, Cavalry and Sappers. It had a barrel twenty-six inches long, of caliber .69, a lockplate like the Cadet pattern, and was built lighter in

a rod extending from opposite the lockplate to the rear band. The Cavalry pattern was trimmed with brass. A few of these were rifled and sighted for the Minie bullet. The musketoon was a poor arm, having neither range nor accuracy.

When the 1842 muskets were disposed of after the Civil War they became very popular as shotguns; for the fourteen-gauge wads just fitted them, and the long, accurately bored barrel threw shot extremely well.

This was the official end of the smooth-bore. The Government had always used rifles more or less, issuing models in 1800, 1817, 1819 and 1841; but the difficulty in loading them when dirty prevented their general adoption. The appearance of the greased Minie bullet, which fitted loosely, went down even a dirty barrel easily, and then expanded on the explosion of the powder so as to fill the grooves largely obviated this and permanently retired the smooth bore.

In 1855 the Government made the Minie rifle regulation, and used it until the breech-loader displaced it.

## Long Rifle May Be Stockade Gun

BY JOE KINDIG, JR.

I HAVE read Captain Clark's article on the long, heavy, odd rifle. I have given the rifle a rather close examination. Captain Clark asked me for my opinion on it. I believe the rifle to be a stockade rifle, used in some old fort to pick off an enemy at a longer range than could be obtained with the usual size Kentucky rifle.

We had best first consider the points which make this rifle unusual. First, it has the unusual length of six feet. Second, it has an unusually large bore of .75 caliber. Third, it has no method of carrying a ramrod along with the gun. Fourth, it is of very crude workmanship.

The first two of these points—the gun's great length and large bore—almost prove that the rifle was made for long range shooting. The third point, the lack of a method of carrying a ramrod, indicates that the rifle was made to be used within a few hundred feet of where it was kept and not to be carried all over the country. I believe this explains itself because a ramrod five feet long carried by itself over long distances would soon become bent if of iron, or broken, if of wood. The fourth point, the crude workmanship shows that this rifle was made for military service in some form or other and not for sport or shooting matches. Such rifles are often beautifully ornamented and at least they show good workmanship. This rifle shows crude workmanship in stock, outside of barrel and mountings, although it does contain a very good lock and the barrel is well rifled.

Now Captain Clark's idea, as stated in *THE AMERICAN RIFLEMAN*, January 15, 1924, is that the rifle was made only as a match rifle to see which gunsmith could make a rifle which would shoot the farthest. The extreme length and large bore of this rifle would support this theory. But the other two unusual features of this rifle disprove it. For as these matches would have been held at different places, it would have required moving the gun from one place to another. Any gunsmith making a rifle which would have to be used much would have had the ramrod attached. Moreover, as Captain Clark says, these long range matches were held by the gunsmiths. Well, any gunsmith with any self respect would have been ashamed to appear at a match with a rifle as crude as this and admit that he had made it.

Captain Clark speaks of a third theory that it was a tavern rifle and was used to shoot with to see who would pay for the drinks. Yes, but if that would be the case, why the long barrel and large bore? In those remote days, whiskey was cheap while powder and lead were comparatively high in price. Till each man had tried his luck with a .75 caliber ball and corresponding charge of powder it would have made high-priced drinks, when the same results could have been obtained with a .35 caliber rifle. Moreover, any self-respecting tavern would want a rifle of at least some beauty and not crude.

Now we come to the theory of a stockade rifle made for long range shooting. This would require a long gun of large bore. The rifle was to be used within the fort and nowhere else. Consequently, there was no need of attaching the ramrod for convenient carrying of the rifle and ramrod. And last, like the early musket, it was made

for use and service and not for beauty—which accounts for its crudeness.

Captain Clark mentions that the rifle was not made until after 1799 and that there would have been no use for a stockade rifle in Kentucky at that late date. The fact that the rifle was recently found in Kentucky doesn't prove that it was made there or even made to be used there. It may have been used in a fort west of the Mississippi River and at some later date somehow drifted into Kentucky.

Regardless of what it was used for, it is an interesting old American rifle. It has many resemblances to the old European Wall guns and in my estimation is an American Stockade rifle.

\* \* \*

## More C. P.

WE have just received a most interesting letter from Captain Hugh Smiley, who states that he has several pieces in his collection marked C. P., that antedate the Revolution and he is wondering if the meaning of the C. P. mark has another significance besides "commonwealth property" or "Commonwealth of Pennsylvania." This is a question open to discussion—there is no doubt but that many such pieces exist but were they not so marked after coming into possession of the State?

We know positively what the mark stands for—and it seems hardly possible that a double meaning could be given it as the state would have adopted a different mark from one already in use. However, it has been proven beyond question that such markings do not prove that a piece was continental although no doubt many pieces made prior or during the revolution were stamped "C. P." after coming into possession of the State.

\* \* \*

## Was Ethan Stillman a Musket Maker?

BY "SMOOTH BORE"

TO give the collector a fine illustration of what the firearm's author is up against in his work of research, and to explain in a measure, why it happens that so many confusing facts become a matter of record, I will recount what happened when I undertook a little research work on my own account.

Some ten years ago a woman of one of the old families in town showed me a musket carried in the American Revolution by an ancestor. I had heard from many sources that she had such an ancestor in the war, but I shook my head at the gun. Looking it over carefully, I found the lock was marked "E. Stillman," location not mentioned. However, that name appeared enough and should tell the story.

Consulting my copy of "Firearms in America," I found him listed under "Arm Makers, Brookfield, 1899"—none too definite. Turning to the U. S. Cartridge Company's catalogue I found him listed as a contractor for Model 1808, with a note that when the War of 1812 broke out he had made 1675—again he was located in Brookfield, Connecticut.

Now it so happens that Brookfield borders us on the north, and not being satisfied with what I could learn of Stillman from books, it occurred to me that it would be a very easy matter to run up there and learn all about him first-handed.

A few days later found me in Brookfield.

Brookfield is one of those sleepy old Connecticut villages whose glory lies all in the past, changing little in character in the last hundred years. Quaint old houses fringe its one street, appearing like those on stage scenery, with doors that never seem to open or close. Most of its residents were born there and their ancestors before them, and for this particular reason I thought my task would be an easy one. Again, the friend who I was going to take the matter up with, was in his day, fifty years ago, the most noted collector in this section and had among many other things a fine lot of old arms, and when he told me he had never even heard of Stillman I thought he must have been losing his memory (he was well along in years). No! He had never even heard of him, but give him a few days and he would ask about for him. A few days later I had a letter from him—he could find no trace of Stillman, ask where he would. "Haven't you made a mistake, don't you mean Brookfield, Massachusetts?"

A few days later I was in Brookfield again. This time to call on its historian—a woman who had written and published many pretty sketches of "Old Brookfield." I explained to her in detail what I wanted. No she had never heard of such an industry, but give her a little time and she would go over the church records, tax records, and all other town records that might disclose it. I left her with the promise that she would make her best effort. A month later I received her letter, search as she would there was neither record nor recollection of Ethan Stillman, nor of his industry, but if such a business was carried out there it was probably in connection with a blast furnace or iron works that was there as early as 1732, and that if at any later date she should learn of him she would let me hear from her at once. As the years roll by and I do not hear from her, I can but conclude that the arms' collector who would know, even a little, must dig deep.

\* \* \*

## How to Set Your Gun Flints

DO you know how to set a flint?

The locks of English guns were made to take the flint flat side up—this was so that the edge of flint would strike high up on the striker and produce a good spark and also throw the striker, or hammer, as it was then called. If the flint was set flat side down it would not work nearly so well and produced many misfires.

Colonel Peter Hawker, who in 1814 was considered the leading English authority on guns and shooting, has the following instructions in his book:

"Flints. None are better than the most transparent of the common black flint. Great quantities come from Lord Cadogan's estate at Brandon. They should be put in with flat side upwards, stand well clear of the hammer (or frizzen as it is now called) and yet be long enough to throw it. Screw them in with leather as lead strains the cock (or hammer) and cloth is dangerous, from being liable to catch fire."

Military pieces being made much stronger than usually used sheet lead—our own muskets had flints so mounted in oval pieces with oval holes cut from centre so that when wrapped around flint that it would clear the hammer screw.



# THE NRA NEWS



Conducted by **C.B. Lister**

## CANON CITY, COLORADO RIFLE CLUB AFTER THE SUPPORT OF ITS COMMUNITY

Two hundred residents of Canon City, Colorado, considered as eligible for membership in the rifle club have received the following letter. The letter ties together the national activities looking toward greater interest in rifle shooting and the local activities of the Canon City Rifle Club in splendid style, and it calls the attention of the citizens to a number of facts relative to the use of firearms and anti-firearms legislation which the residents of the community should know. There is an idea here for every club which can use some new members and feels that greater support from the community can be turned to advantage.

### "TO FELLOW MEMBERS OF THE CANON CITY RIFLE AND PISTOL CLUB AND THE PUBLIC GENERALLY:

"Recent measures taken by Congress, after the close of the war, resulted in creating a National Board for the promotion of marksmanship for civilian practice.

"This is a department of the war office. It has power over certain matters in connection with this object, among which is the granting for use to local associations a certain number of supplies in the way of guns and ammunition.

"Our organization was supplied this last year with two service 30-30 and two 22-caliber guns. With this has come about 14,000 rounds of ammunition. But little of the 30-30 has been used, but a large part of the 22-caliber has been used in target practice at the Armory. Necessarily indoors. Targets have been fitted up for outdoor practice and as soon as weather conditions permit an effort will be made to engage in that. Our membership, originally of some thirty, has been reduced slightly, but is nearly made up by new members recently voted in and there is a waiting list, which will probably bring the membership up to the present authorized membership. Since we succeeded in securing the armory for practice, meetings have been very regular and well attended. The results of the practice meetings have been given as much publicity as practicable for several reasons.

"It has been recognized as a fact that the use of firearms has gradually become subject to the sentiment of a large number of people that in some way it was connected with lawlessness. The possession of a revolver and the ability to use it were related to banditry, hold ups and other similar crimes. It has been the aim of the association to disabuse the mind of the public of this idea and to inculcate the opposite.

"The safety of our people and the enforcement of our laws rest finally on the ability of the officers of the law and good citizens to enforce those laws in extreme cases by using deadly weapons. The possession of these weapons, if not coupled with the knowledge of their nature and the ability to use them, is itself a danger to everyone.

"It is one of the aims of this club and others with which it is associated, to create such a sentiment throughout the country as will prevent, as far as possible, the possession and even the manufacture of such weapons as are now in the hands of the criminal classes and to provide such ex-

treme penalties for the misuse of them as will very greatly reduce the list of crimes caused by the unlawful use of all firearms.

"The ability of policemen to properly use weapons and to refrain from their use unnecessarily is greatly enhanced by the practice which becomes available to them in this club practice. All the City force has availed itself of this means.

"With the daily accounts of hold up affairs throughout the country it would be very desirable if every business man along our streets would arm his employees and encourage training in the use of weapons.

"The Post Office Department has armed its employees with instructions to use them. Within the period in which this order has been in force but very few mail robberies have occurred.

"Besides the utility of this marksmanship practice, there is no sport in which a business or professional man can get greater relaxation from his cares than in an hour of competitive shooting in agreeable company. It calls for a greater concentration of effort than golf, or such mild relaxations as cards, or even a game of chess. He forgets anybody owes him or he owes anybody. He forgets all his troubles and centers his whole soul in trying to hit a little black spot that keeps dodging out of his sight, seemingly as lively as an old-fashioned flea. When he does actually catch that little spot and puts a hole through it he feels he is a man again, even if his head is frosty with the snows of many winters.

"If you are a member of this organization do not fail to attend the business meeting to be held at the Chamber of Commerce Tuesday evening, Jan. 15th, at 7:30. This will be our annual election of officers and for the election of new members and for the transaction of any other business pending at that time.

"If not a member and wish to become one, have your name presented at that time. It is desired that all good citizens become members. None but good citizens are desired.

Very truly yours,  
J. P. WALTERS, President,  
W. D. HARRY, Secretary."

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## CIVILIANS AND GUARDSMEN GET TO- GETHER IN NEW YORK STATE

Word comes from Mr. Roy C. McHenry, at Binghamton, N. Y., that the National Guard units in that State have leased the land adjoining the civilian rifle range at Fort Dickinson and planned on immediately installing target butts and firing positions. The range will extend back to one thousand yards and arrangements have been made between the guardsmen and civilians so that the present civilian range will be turned into a pistol and small-bore layout which the guardsmen will use, in return the civilians will have the privilege of using the new service rifle range.

A great many National Guard units are handicapped in their rifle training through lack of range facilities. A great many civilian clubs could use improved facilities if they had the money to get them. A little co-operation on both sides will work wonders in most cases.

## A REPORT WORTH READING

The following extracts from the report of Mr. G. S. Bassett, Jr., Secretary-Treasurer of the Ameco Rifle Club, Ambridge, Pennsylvania, are quoted verbatim because of the inspiration which they contain for clubs which are having hard sledding. No outfit ever had a more discouraging outlook than the Ameco Club, with only six members left at the beginning of its third year. There is a great story of courage and resourcefulness to be read between the lines of this report, and there are some ideas, too, for any club executive committee.

It is interesting to note in the financial statement appended to the report that the entire issue of five per cent bonds were redeemed during the year.

"January 19th, 1924

"Report of the Secretary-Treasurer covering the activities of the Ameco Rifle Club for the year 1923.

"On January 1st, 1923 the Ameco Rifle Club entered upon the third year of its organization. The beginning of this year disclosed a most discouraging outlook for the progressive continuation of the club. While the previous season had been fairly active and the club had established its identity in a small way, still there was not sufficient interest to forge ahead and add such facilities as would make a club membership more attractive to those who were not what might be termed the most ardent rifle cranks.

"With but six or eight of the members showing much interest in the club's welfare and our equipment consisting of very little in excess of a target for 200 yards and permission to use the property on which our present range is located, it appeared that there would be untold obstacles to overcome to put the club on an operating basis that would make it attractive to additional membership and encourage rifle marksmanship. However, the few members who still had faith in the possibilities of a first-class rifle club held a meeting the early part of the year and outlined a promotion plan which included the construction of a range house and the installation of better shooting facilities. Of course, it was understood that these improvements would require the expenditure of what appeared to be considerable money. As but a small amount remained in the treasury it was decided to offer club bonds bearing interest at five per cent in five-dollar denominations to anyone interested and having faith in the project. A total of \$70.00 was secured in this manner which was deemed sufficient with which to make a beginning. Accordingly on the first Saturday in April construction of the range house was started. After a month of strenuous work which was more or less handicapped by inclement weather, the range house was completed, additional targets were installed and the range was opened for shooting on May 5th as scheduled.

"Almost immediately with the commencement of the actual work of range improvement, membership applications were being received from individuals interested in the sport of rifle shooting and during the season we added a total of twenty-six new members, which with eight members of the previous season renewing their membership, makes a total of thirty-four active members now enrolled.

# HAVE YOU SENT IN YOUR REAFFILIATION FOR 1924?



"The shooting schedule arranged for the outdoor season to open May 5th and close Oct. 28th, provided for only six rifle matches and one shotgun match, the idea being to allow sufficient open dates for special matches, percentage qualification and team match shooting. The first match scheduled to be shot at fifty yards off-hand did not prove to be very popular and was not shot, but the lack of interest in this match was more than made up by the increased entries of later matches.

"June 9th—Rising Bear Match—Open to Anybody.

"June 30th—200 yds., Slow Fire, Prone—Members Only.

"July 14th—Running Deer Match—Open to Anybody.

"August 18th—100 yards, Slow Fire, Prone—Members Only.

"September 22nd—200 yards., Slow Fire and Rapid Fire—Members Only.

"October 27th—Shotgun Match, 25 Birds—Open to Anybody.

"On June 9th we were honored by a visiting team from the Ellwood City Rifle Club, and a team match was shot with that club, the conditions being five shots at the rising bear and ten shots at fifty yards. The five high scores of the visiting team totaled 702 as against our five high scores totaling 652 points.

"Our next special was an open shotgun match on July 28th which drew thirteen entries. Class A was won by G. H. Famous, breaking fourteen birds; Class B by T. C. Beal, eleven birds; and Class C by G. S. Bassett, Jr., eight birds.

"The one big event of the season was the special program for Labor Day, Monday, September third, which provided for a re-entry shotgun match, five re-entry rifle matches and a re-entry revolver match. In these matches there was a total of four hundred and forty-one entries and re-entries. Unfortunately, as some of you will remember, weather conditions were such that the entries in these matches were not concluded until the following Sunday morning. Space will hardly permit of enumerating the winners of the various classes in all the matches, but these records may be found posted in the range house. In connection with this program our gross receipts amounted to \$182.50 and with an expenditure of \$142.02, left a net profit to the club of \$40.48.

"At various times during the season the Team Challenge Trophy Match was contested, this being a two-man team match, the conditions being as named by the challengers. This match was won by E. Molmark and Wm. Soukup.

"Shooting for Percentage Qualification during the season under conditions as outlined in our 1923 booklet, proved quite popular and ribbons covering percentage qualification scores at the various ranges have been awarded.

"Of a total of seventeen entrants for Percentage Qualification only twelve returned the necessary number of qualifying scores to secure a qualification ribbon.

"In participating in a series of team matches conducted by the Western Counties Small Bore Rifle League, which is composed of clubs similar to our own, the Ameco Club shot its way into third place.

"As an example of our efforts towards an improvement in the quality of shooting by our members, I might mention that during the whole of

the 1922 season only two possible scores were made at 200 yards, while during 1923 there were twenty-two possible scores made at this range, fifteen in qualification shooting and seven in various scheduled matches. One of these possible scores was made by our very enthusiastic lady member, Mrs. G. H. Famous. The longest straight run at 200 yards was made by Mr. G. H. Famous and G. S. Bassett, Jr., each with eighteen straight bullseyes. At 100 yards, E. Molmark had the high score of 98, while at 50 yards, honors were divided between D. A. Gilbert and E. Molmark, who each had a score of 99.

"In order that you may more fully appreciate the magnitude of our season's activities, would state that the range was open for shooting during twenty-seven consecutive Saturday afternoons, eight Wednesday evenings and all day July 4th, and Labor Day, September 3rd, during which time there was turned in a total of 95 shotgun scores of twenty-five shots each, making 2375 shots over the traps. In rifle matches and rifle qualification there were 1569 scores, rifle practice 341 scores or a total of 1910 rifle scores averaging ten shots each, which means a total of 19,100 shots fired over the various rifle ranges. This, of course, does not include numerous shots fired of which we have no record, but no doubt considerably over 20,000 shots were fired over the rifle ranges.

"Range equipment has been accumulated to such an extent that we now have a range house, a number of chairs, several tables, range telephones, score boards, etc. For targets we have two sliding frames for 200 yards and a double sashing frame for both 50 and 100 yards with the necessary target butts at 50, 100 and 200 yards, as well as a target butt from which the running deer and rising bear targets are operated. In addition we have marking discs, flags and such other equipment as to afford the best possible service and convenience to the shooters. Our range house and equipment has an appraised valuation of \$350.00. The club also has in its care two small bore rifles and two .30 cal. Springfield rifles which are loaned to us by the U. S. Government, Rifle Promotion Division of the War Department.

"In conclusion it give me pleasure to state that the season's achievements as outlined were made possible by the earnest co-operation and faithfulness on the part of our members, as in no instance did the club seek any assistance, financial or otherwise from outside sources.

"In anticipation of the continued success of the Ameco Rifle Club, this report is respectfully submitted.

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#### NEW STATE SECRETARY FOR WASHINGTON

Lieutenant Paul J. Roberts, Washington National Guard, stationed at the office of the Adjutant General, Camp Lewis, American Lake, Washington, has been recommended for appointment to the office of State Secretary for the National Rifle Association in the state of Washington. The recommendation of the Adjutant General has been approved and the riflemen of Washington are assured of the services of the State Secretary, whose co-operation with the Adjutant General and experience at the National Rifle Matches well qualifies him for the job.

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#### FREMONT BOASTS JUNIOR RIFLE CLUB

A Junior Rifle Corps has been organized in Fremont, Ohio, in connection with the Boy Scout troops under the guidance of the Fremont Rifle and Revolver Club. The instruction of the boys will be directly in charge of Captain Guy Emerson, of Wimbledon fame. There are not very many groups of boys in the United States who are in the hands of as competent an instructor as the Fremont Scouts. It is to be expected that the reputation of Ohio, established by the Emersons, Richards, et al, will be ably upheld by these youngsters. Too many civilian rifle clubs are overlooking the possibility of recruits latent in the Boy Scouts and similar boys' organizations in their communities.

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#### HAIL TO THE ADJUTANT GENERAL OF OREGON!

The following editorial paragraph from *The Oregon Guardsman*, official publication of the Oregon National Guard, dated January 15th, is of material interest to every rifleman in that State. Civilian rifle clubs should render every possible assistance to the Adjutant General in his efforts to find adequate range facilities for the National Guard companies. Such co-operation on the part of the civilians will most assuredly be reciprocated by the Guardsmen, and both will be bound to benefit.

#### "THOSE TARGET RANGES"

If you haven't a rifle range, now is the time to start taking steps to get one.

The Adjutant General has expressed the hope that by the end of the outdoor target season that every organization will have a target range.

The initial step toward obtaining a rifle range must originate with the organization commander. He must select the site and make tentative arrangements for securing a lease on the ground.

The Adjutant General is ready and anxious to do his part by detailing an officer to look over the ground, prepare leases and secure the money from the War Department to pay for the lease and for necessary construction work.

One of the best company ranges in use today is one secured by the commander of a comparatively young line company in the Oregon National Guard, and yet some of the older companies are still working under the handicap of not having an outdoor range.

There must be a suitable site in your vicinity. Find it and get started on your target practice early."

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#### PORTLAND POLICE PREPARE FOR CAMP PERRY

The Portland, Oregon, *Hustler* for January contains an interesting write-up on the activities of the police revolver teams in Portland, which reveals that the guardians of the law in Portland have been enthusiastic pistol shots since, at least, as far back as 1905. The Portland delegation will be remembered as the winners of the police pistol team match at Camp Perry last year, where the squad from the Northwest made a great many friends. An interesting paragraph from the article which will bear repeating when you take up the

4? HOW MANY NEW MEMBERS HAVE YOU SIGNED UP?

matter of police marksmanship with your local authorities, reads as follows:

"One of the reasons that in Portland, in comparison with other large cities in the United States, very little crime is committed, is because the Portland policemen are taught to hit the bullseye with greater regularity than any other police in the United States."

It is to be hoped that there will be some police departments which will take issue with the Portland force on the latter part of this paragraph, as it is only by competition between the departments that interest and enthusiasm can be aroused.

Portland will defend its title as police champions at Camp Perry this year. The team selected should be a good one, as a series of twelve matches will be held during the season, and the five high men in the twelve matches will be chosen to represent the city.

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#### WHAT ABOUT PICTURES?

THERE is no better publicity in the world than good pictures, but rifle club secretaries apparently fail to recognize the fact. Pictures are not only desired, but are urgently needed for circularizing purposes, showing the clubhouses, club arrangements, club galleries, club matches, and club trophies. It requires no strenuous labor, mental or physical, to get a good photographer to take a few good pictures suitable for reproduction, and the publicity which will be received from such photographs will certainly repay the small amount of energy required to get them. Although your range may be commonplace enough to you, it probably contains features which will be of interest to other clubs.

Get busy on this important matter now!

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#### UNIVERSITY OF CALIFORNIA HAS HEAVY SCHEDULE

THE reputation of California as one of the "shootiest" States in the country is being ably maintained by the University of California Rifle Squad. The University, in common with the majority of California Clubs, lays a great deal of stress on the work with the service rifle and regularly enters a team in the programmed matches of the California State Rifle Association. In addition, they maintain a regular schedule of dual matches in the gallery, in order that they may take on all comers.

The schedule of the squad for the remainder of the season will indicate to civilian club secretaries the system of definitely scheduling matches in advance followed by the colleges:

February 8—Triangular match: California, University of Washington and George Washington University (Washington, D. C.).

February 16—Stanford; Johns Hopkins University.

February 22—University of Pittsburgh.

March 7—Michigan Agricultural College.

March 14—Massachusetts Institute of Technology; Dr. Drexel Institute.

March 22—Open.

March 29—Syracuse.

April 8—Harvard.

April 12—University of Nevada; University of Alabama.

April 19—Open.

In addition, there will be at least one other match with Stanford, and probably one or two with other colleges, with whom negotiations are now being carried on.

Incidentally, any civilian club with as full a schedule as this college team has, would be as-

sured of considerable interest on the part of club members and local newspapers.

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#### NEW RIFLE CLUB FOR NEW YORK CITY

ON MONDAY evening, January 28th, a meeting of riflemen was held in New York City which should be of far-reaching importance to the game in the metropolis. The report of the meeting reads:—

##### "A NEW RIFLE CLUB"

On Monday evening, January 28th, the Roosevelt Rifle Club was formed by some forty-odd members, the same to be a N. R. A. club of standard design, and to shoot in New York. There seems to be a real need of a real N. R. A. Club here in New York, and we hope to soon have 200 members.

Those present or accounted for were:

Dr. Arthur Nilsen	G. P. Gunter
Joseph Martin	Karl T. Frederick
C. G. Goodard	Major J. J. Dooley
T. R. Baxter	Frank Kahrs
Jimmy Hilborn	William F. Baxter
Jerome H. Hilborn	Lawrence J. Corsa
Pedro H. Agramonte	Leo Manville
Louis C. Sigloch, Jr.	Lt. R. P. Overnashine
John Hession	Lt. A. M. Siler
R. A. Deverous	Lt. J. R. Hubbard
W. M. Affelder, Jr.	Arthur A. Brick
V. V. Natalish	Frank Wonnels
A. J. MacDonald	Clifford Parkhurst
Lovett Ryle	William Treanor
J. E. Murray	Frank J. Forster
Walter Kelsey	Robert McL. Glasgow
Alonso Letts	John W. Gillies

Officers were elected as follows:—

President .....	John Hession
Vice Presidents .....	Lawrence J. Corsa
	P. H. Agramonte
	Joseph Martin
Secretary .....	Lt. A. M. Siler
Treasurer .....	Robert McL. Glasgow
Executive Officers .....	Jerome M. Hilborn
	J. W. Gillies

Honorary Members were elected as follows:—

Lt. Col. Theodore Roosevelt, Jr.
Col. C. E. Stodter
Gen. George W. Wingate
Major Townsend Whelen
H. M. Pope

The laws as required by the National Rifle Association were adopted, and it was voted to affiliate with the N. R. A. immediately. A range will be secured in the heart of the city, for indoor work, and one within easy motor distance for outdoor work. There are enough cars in the club to provide transportation for all hands to the outdoor range.

There was a real need for a rifle club here in New York, which would engage itself in digging out new shooters, as there was always the old gang in evidence whenever any shooting was done. It is the purpose of this club, primarily, to dig out all men interested in shooting with the rifle, and teach them the refinements of the game. With scarcely any effort we started off with thirty-five members, and it is freely predicted that before the year passes out we will have two hundred, and be a healthy prosperous club."

This new club has the personnel to completely carry out the ambitious program which was outlined. This plan includes a range in the heart of New York for indoor work, and one within easy motoring distance for outdoor shooting. The concluding paragraph of the report of the organization of the club indicates the splendid spirit with which it gets under way.

It is not too much to expect of this organization that they will within a short time be equipped with club room and range facilities which may be

looked upon as models, and which will naturally become the headquarters for visiting riflemen from all over the country who happen to be in New York.

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#### YELLOWSTONE RIFLE CLUB HOLDS ANNUAL MEETING AND PLANS BIG DOINGS

THE Fifth Annual Meeting of the Yellowstone Rifle Club, Billings, Montana, was held in the club rooms on January 19th. It was unanimously decided that the club would take charge of the W. J. R. C. activities in Billings with the idea of getting the boys of the city interested, allowing them the use of the club's indoor range under proper supervision, and training them in the proper use of firearms. A committee of three was appointed to act with the local Winchester dealer in putting this highly commendable plan into operation at once.

The second plan which was adopted and which is of interest to other clubs, is the division of the entire club into two teams by the old familiar scheme of "choosing sides." These two teams will shoot over a given period of weeks as soon as the outdoor season opens, and the losers will "pay the freight" for a club dinner.

The third stunt is what the Yellowstone Club calls a big game hunt. Figures of running deer, bear, mountain goat, etc., are cut from the standard gallery targets, with the center of the ten ring approximately over the animal's heart. The figures are cut to scale, the running deer measuring about four and one-fourth inches from chest to tail, with other dimensions in proportion for the seventy-five-foot range. These paper animals are suspended from a pulley arrangement and run across the front of the backstop. A light drag is hung from the hindleg or stomach, which as it moves unevenly over the floor, gives the animal the desired jumping motion. The animals are run across the backstop at some predetermined speed.

Events of this nature serve to provide the "something different" that is so often desired during the gallery season, and from newspaper reports of the first match held by the Yellowstone Club, it is very evident that gallery big game hunts are not only feasible but are well received by the shooters.

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#### COMPETITION FOR OAKLAND RIFLE CLUB TROPHY

THE Olympic Rifle Club, of San Francisco, won the California Rifle and Pistol Association's competition for the Oakland Rifle Club Trophy on January 20th. The Olympic Club's score of 1141 over the course of twenty shots offhand, ten shots, two hundred rapid, ten shots, three hundred rapid, and ten shots, five hundred rapid, was 89 points better than the Southern Pacific Club was able to get together. Southern Pacific Club finished second with 1052. The teams consisted of six firing members and it will come as no surprise to the men who were on hand at Perry last year to learn that E. N. Moor, Jr., one of the most promising additions to the International Squad of last year, finished high man in the field of sixty-nine competitors, with a score of 207. The match was fired under sporting conditions with a gusty wind sweeping across the range at fifteen to twenty miles per hour.





Conducted by

Col. C. E. Stodter

## Components for Reloading

Riflemen on the Pacific Coast now have an opportunity of securing components for reloading at a very low price, as shown in the following list:

The following material is available for sale at Benicia Arsenal to members of the N. R. A. Request to purchase any of this material must be sent to the Director of Civilian Marksmanship for approval, and must be accompanied by bank draft, certified check, or money order made payable to the Director of Civilian Marksmanship, covering the value of components of ammunition ordered:

12,915 Bullets, Service, cal. .30, model 1906, 150-grain, flat base .....	\$5.00 M
15,000 Bullets, pistol, cal. .45 model 1911 for automatic pistol .....	4.00 M
111,780 Cases, cartridge, primed for cal. .30, model 1898 rifle (Krag) .....	2.50 M
1,000 Cases, cartridge, primed for cal. .38, revolver (Long Colt) .....	2.50 M
12,099 Cases, cartridge, primed for cal. .30, model 1906 ammunition .....	6.00 M
4,300 Cases, cartridge, unprimed, cal. .30, model 1906 .....	4.00 M
5,000 Cases, cartridge, pistol, primed, cal. .45, model 1911 automatic pistol .....	3.00 M
5,000 Cases, cartridge, pistol, unprimed, cal. .45, model 1911 .....	2.00 M
4,500 Primers, for cal. .30 cartridges, model 1906 .....	1.00 M
16,817 Primers, cartridge, cal. .30 and .45 .....	1.00 M
21,225 Primers, revolver cartridge, cal. .38 .....	1.00 M
16,242 Primers, cartridge, to be used with black powder in cal. .45 and cal. .30 gallery practice .....	1.00 M
5,000 Primers, improved, No. 1 W for rifle and pistol cartridge, using smokeless powder..	1.00 M
6,610 Primers, improved, No. 1 for rifle and pistol cartridge, using No. 1 primer and black powder .....	1.00 M
6,500 Primers, improved, No. 1½W for pistol cartridges, using No. 1½W primers, using smokeless or black powder .....	1.00 M
3,000 Primers for shotgun shells .....	1.00 M
2,750 Primers, No. 1 for pistol and rifle cartridges .....	1.00 M
390 Primers, improved, No. 1 adapted to pistol and rifle cartridges, using No. 1 primer and black powder .....	1.00 M
500 Primers, No. 1½ for paper and brass shotgun shell .....	1.00 M
1,250 Primers, No. 2 for paper and brass shotgun shells .....	1.00 M
770 Primers, No. 2½ adapted to improved center fire cartridges for either smokeless or black powders .....	1.00 M
3,500 Primers, No. 4 adapted to paper shotgun shells using Nitro powders .....	1.00 M
5,900 Primers, No. 4 for smokeless powder shotgun shells .....	1.00 M
7,700 Primers, No. 5, copper, adapted to smokeless powder for small arms .....	1.00 M

### LOOK OUT FOR HANG FIRES

In view of the fact that some of the ammunition now being issued to rifle clubs is of war-time manufacture and that there are occasionally hang fires and misfires, great care should be taken in case of misfires not to open the bolt of the rifle immediately but to wait a few seconds to insure against the possibility of the cartridge being discharged as the bolt is being opened. If a second attempt is made to fire the same cartridge the rifle should be cocked by drawing back the cocking piece instead of opening the bolt. In case of accident a full report should be made at once to the Director of Civilian Marksmanship, which report should state definitely the kind of ammunition being used and the lot number or other description as furnished in each bandolier.

### TELESCOPE SIGHT BASES

Arrangements have been made for attaching the Winchester telescope sight bases to the U. S. rifle, caliber .22, model 1922, commonly known as the "Springfield, .22-caliber rifle." These bases can be fitted to rifles ordered through this office at an additional cost of \$1.50, provided the telescope is ordered at the same time as the rifle. The Winchester A5 telescope can be furnished complete with bases for \$27.00. If the bases only are desired, but not the Winchester telescope, the cost of the bases, which is eighty cents (80 cents) should be added to the above price. Purchasers who already have telescope sights that they desire to have fitted to one of these rifles purchased through this office should forward the bases with the order for the rifle. Care should be taken that

the bases are of the proper dimensions for this rifle. On account of the taper of the barrel the front base must be considerably higher than the base usually required for single shot target rifles.

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### CARBINES REDUCED IN PRICE

THE reduction in price of the Krag carbines, reported as being on hand in the January 15th issue of THE AMERICAN RIFLEMAN to four dollars (\$4.00) gives N. R. A. members an opportunity of obtaining a rifle suitable for hunting purposes at a very low price. The Krag carbine is a very convenient and handy rifle and the cartridge is an excellent game killing one. This arm is thoroughly reliable and durable. In view of the fact that the barrels of these carbines are not in first-class condition, being somewhat pitted, and the stocks show considerable wear, the price was reduced, on recommendation of the Director of Civilian Marksmanship, to \$4.00. There is still a considerable supply of Krag ammunition on hand at Schenectady, N. Y., Augusta, Ga., and Erie Proving Ground, Ohio. We also have a large quantity of primed cases for the Krag rifle and carbine at Benicia, Calif., at the very low price of \$2.50 per thousand. This lot of carbines is undoubtedly the last on hand and it is suggested that those members of the N. R. A. who were not able to obtain carbines previously send in their orders as soon as possible. If purchasers desire the carbines shipped by parcel post it will be necessary to send stamps to cover parcel post charges. The shipping weight of these arms probably will be from fifteen (15) to eighteen (18) pounds.

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### NEW WINCHESTERS FOR SALE

We now have a supply of Winchester, .22-caliber, single shot rifles, model 87, chambered for the .22-caliber long rifle cartridge. These rifles are equipped with the Lyman No. 53 Receiver sight and have full length fore arm with sling swivels. They are of the same model as the .22-caliber short rifles issued to rifle clubs. N. R. A. members can purchase these rifles at the regular Government price of \$18.80 each, which includes packing charge. These rifles are new and in perfect condition. In view of the fact that the Winchester Co. has discontinued the manufacture of this model it is probable that the lot now on hand is the last that will be available. The Winchester Co. will continue to supply spare parts for these rifles when needed. This rifle always has been very popular on account of its excellent accuracy, its smooth working action and good sights. The Lyman No. 53, with which these rifles are equipped, is fastened to the right side of the receiver and elevation is secured by means of an elevating screw. The sight is locked firmly in position by a cam with thumb lever. Windage is secured by means of a screw with thumb piece on the left side of the sight. These sights are capable of quick and accurate adjustment and cannot be jarred out of position. Either the model 1907 leather gun sling or the model 1917 web gun sling can be used on these rifles. The length of the barrel is twenty-eight inches and the weight of the rifle is about 8½ pounds.



# THE DOPE BAG



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Shotgun and Field Shooting: Capt. Charles Askins

Every care is used in collecting data for questions submitted, but no responsibility is assumed for any accidents which may occur.

## What Is Accuracy?

*A study of the relative standards for the service rifle and ammunition set by Mann barrel tests as against practical shoulder group shooting*

By Townsend Whelen

**C**EASELESS competition to turn out winning rifles and winning ammunition for the National and International Matches, I fear, has thrown a misleading silver-lined cloud over the matter of accuracy.

Certainly, it seems to me that the selected—yes, very carefully selected—groups one sees published are beyond all doubt not calculated to give one a clear idea of the accuracy the rifleman can obtain with his own rifle. When we consider that these groups are usually fired, not from an ordinary shoulder rifle, but from a piece of ordnance with a barrel one and one-half inches thick, held in a Mann "V" rest this is even more apparent.

From one of the many shooters who, taking machine rest figures as their standard, are becoming a bit discouraged when their service rifles fail to produce record groups, has written to me a very good and a very genuine letter; such a letter as I like to receive and like to answer fully and truthfully, since it may do good in clearing up matters which are sometimes beclouded. Here is his predicament:

"I am after a little fatherly advice in regard to a new rifle or a rifle barrel.

"I have a star-gauged Springfield, also a Model 95 Winchester with a special Springfield barrel of the regular weight (not a pressure barrel). Now, the best that any of us can do with either of these guns is quite a bit over three-inch groups at one-hundred yards and a lot of the groups are a darn sight bigger. All they have on them is Lyman sights.

"Now, of course, none of us are good shots—that is, trained riflemen—but we shoot quite a little. One of the men has a common .32-20 Winchester shooting a lead bullet not sized or weighed or sorted with no powder weighed, but just guessed at, and she shoots just as good or better than the Springfield. I also fired a few shots out of a .250-3000 1920 Savage the other day with factory sights and factory ammunition and it showed up fine, about three-inch groups, and it's some fine little gun at that.

"I am getting kind of sore on the Springfield game. I have tried to get the best ammunition, F. A. Match, also F. A. Boat Tail, picked as to size and weight, powder weighed, etc. I have gone the limit as far as ammunition is concerned, but haven't gotten anywhere with it. We all hear much about star-gauged Springfields, but

it's all a joke to me for this reason: what's the use of star-gauging a barrel when you can find slight bunches in it? They are not so pronounced when a lead bullet is pushed through the barrel, yet it can be noticed, and when a lead lap three or four inches long is cast in the barrel it shows up plainly. I have lapped some barrels and it seemed to help some, but I am afraid of getting the bore too big. To a mechanic that barrel is not right. I would have new one put on at Springfield if I thought I could get one that would shoot, but in my mind it is doubtful. I wrote the D. C. M. inquiring about a heavy-barrel Springfield and he said that they had a few that were made for the National Matches and that in the tryout these rifles shot practically all the bullets in a four-inch circle at three hundred meters. Price, \$95.00, but he would not guarantee these rifles to make any specified groups. So you see I don't care to take a chance on one of these guns under these conditions.

"Major, where is a person going to get a gilt-edge barrel at a reasonable price and what would you consider a barrel like that worth? I think there are a good many shooters in about the same fix that I am in—not well enough off to afford special guns for the amount of shooting that we do. But, still, there is no satisfaction for some of us to shoot at a two-inch bull with a rifle that makes four-inch groups. The devil himself can't make possibles with that kind of an outfit. Most men get discouraged and quit and I can't really blame them much.

"What will a lead bullet such as the Squib-Miller bullet do in the Springfield with light loads? Also lead bullets in the .250-3000?

"What's your opinion of the .250 as it is, with slow twist for light loads and how much better would it be with a little heavier barrel?

"What kind of groups have you found this rifle to make and, in general, what do you think of it as a light gun for target and small game? It has taken a long letter to explain things as I see them, but, of course, this is nothing new to you. I will be pleased to receive a letter as soon as you can find time to write a few lines."

Now let us get at the bottom of this matter of accuracy as it affects the individual shot. I have personally fired thousands and thousands of rounds of many varieties of ammunition, from many different types of Springfield rifles, from Mann V rest, from regular machine rest, prone

with gunsling, and from muzzle and elbow rest, and with all types of sights. As nearly as I can truthfully average up the accuracy obtainable by an experienced and capable marksman it is about as follows:

Using an ordinary Springfield rifle, or a selected star-gauged Springfield rifle, or a well-remodeled sporting Springfield rifle, all with standard military-weight barrel and with service rear, or Lyman 48 rear, and flat top military front sight, both sights carefully blackened with burning camphor, muzzle and elbow rest, National Match ammunition, the ten-shot groups at 200 yards will run from 2½ inches to 5½ inches, with an average of about 4¼ inches. Understand, the 2½-inch groups will be the very, very lucky ones that one talks about and publishes in magazines, but if one fires twenty groups and adds up the measurements and divides by twenty the figure will not be far from 4¼ inches.

With a first-class telescope sight, this average will be about 3¾ inches, due to clearer vision and less error of aim.

With gold bead front sight, but this gold bead blackened with camphor smoke the groups will increase to an average of about five inches, due to slightly increased errors of aim.

With ivory or gold bead front sights, not blackened, the average will be about six and one-half inches, due to considerably increased error of aim, and lack of clear definition of dead black front sight against white target.

With good hunting ammunition, expanding bullet, such as turned out by our leading cartridge companies, the groups will be about one inch larger than for National Match ammunition.

Now with the heavy barrel rifle, barrel measuring one and one-fourth inches at the breech and seven-eighths inch at the muzzle, telescope sight, and National Match ammunition, the average group will be about 3¾ inches. The finest International Match ammunition will probably go just a shade under three inches.

In all the above cases one will occasionally find a rifle which will shoot about half an inch closer than the above, and he will also occasionally find a rifle which will shoot about half an inch larger groups than the above. These exceptions will perhaps be one in twenty or thirty rifles. What misleads one is that all these rifles will occasionally fire a very small group which gets published. The average groups don't get published as they take up too much space on the page of the magazine.

For all practical purposes it may be assumed that the group at 100 yards is just half the size of the group at 200 yards. All the above averages are at 200 yards.

It will, therefore, be plain that if the average is a little over three inches at 100 yards with Lyman sights (Lyman front sight also, I presume) it is not doing so badly considering that the marksman admits that he is an average good shot but not exactly in the expert class. Remember that I said the above were the averages that an experienced expert shot could obtain. I have been shooting in competition and in test work and group shooting for twenty-five years, and am perhaps in this class, and I can get these averages, but I can't get better averages.

There is not nearly so much advantage in the specially selected, star-gauged barrel as is popularly supposed. About all that one can say for such barrels is that with them one stands very much less chance of getting a barrel that shoots groups half an inch larger than the average. There is in the selected rifle an advantage in the selected stock, smoothed up action, and good trigger pull, but an expert mechanic can finish and adjust a service rifle the same way a National Match rifle is adjusted.

It has been my experience also that the Pope, Winchester, and other special barrels are on the average not a bit better than the Springfield barrel of the same weight. So far as my experience goes, I have yet to see it proven that anyone can beat Springfield Armory in making .30 caliber barrels, and I think that it will also soon have to be admitted that no one can beat Springfield Armory in making .22 caliber rifle barrels. But, on

the other hand, I am perfectly willing to admit that some of these private or commercial manufacturers can equal the Springfield barrel. As in other matters, the issue here also is beclouded. For example, the accuracy of a specially made barrel quite a little heavier than the standard service barrel will be compared with that of the service barrel.

Now as to the .250-3000 Savage bolt action rifle. This is a sterling little weapon. Its accuracy is very surprising considering its light weight, and the fact that the shooting is done with ordinary hunting ammunition, and not selected, specially made ammunition. I have shot a large number of these rifles, sighting them in for friends. I have a very high opinion of them, and have always stated this opinion in answers to correspondents. (It may interest you to know that only about one in forty of my replies to Dope Bag inquiries are published.) Almost all of my shooting with these rifles has been at 100 yards, and while I have never actually tabulated all the results and averaged them, I think I am very close to being correct when I say that (using Lyman rear sight with cup disc, and gold bead front sight, sights blackened) the average group at 100 yards will be about  $3\frac{1}{8}$  inches. Apparently about one rifle in ten will not shoot nearly as well. My own rifle, which was sent to me by the Savage Corporation and which presumably was carefully selected, will average under three inches. Sometimes a certain lot of ammunition will do a little better or a little worse than the above. There is more variation in accuracy of rifles and accuracy of ammunition than in the case of the Springfield. Undoubtedly, if the rifle was made heavier, with a heavier barrel, it could be shot with better accuracy because it is so light it is difficult to shoot, and some of the shots that enlarge to groups are due to very slight flinches or jerks on the trigger that disturb the light rifle. You must consider though that the barrel of the .250 in proportion to its cartridge compares closely to the weight of the service Springfield barrel in proportion to its cartridge. I do not believe that there is a particle of advantage in the ten-inch twist for bullets of 87 and 100 grains weight, and I do not favor the use of the 117-grain bullet in this rifle for many reasons, one of which is that these 117-grain bullets do not seem to be nearly as well made as the 87- and 100-grain bullets.

In my own .250-3000 Savage bolt rifle I have gotten most remarkable results with a reduced load consisting of twelve grains of du Pont No. 80 powder and the 87-grain full-jacketed bullet. The average for about twenty groups at 100 yards has been *under two and one-fourth inches*. I do not believe it is possible to load ammunition with lead bullet that will average anything like as close as that.

Very excellent results were obtained from the Squib-Miller bullet in New York several years ago. It averaged well under two inches at 100 yards. But consider. This average was obtained in *selected* rifles with *heavy* barrels and *telescope* sights on an indoor gallery, and the bullets were cast and the ammunition loaded by men who are perhaps more expert at this work than anyone else in the world, also the shooters were experts of national reputation. Under average conditions, service rifle, metallic sights, outdoors, bullets cast and cartridges loaded by one only fairly familiar with such work, I should estimate that one would be very lucky to average less than three inches.

My advice to you would be as follows: Stick to your Springfield rifle, getting a new barrel at least every 2,000 rounds. Use the cup disc on the rear sight. Use a flat top under cut front sight like the Marine Corps but perhaps not quite so wide. Pay particular attention to getting good uniform light on target and firing point (I like to have myself and the rifle in the shade, and no shadows on the target in group shooting). Blacken your sights. See that the rifle is held and rested as uniformly as possible. Be very careful of your trigger squeeze. Better get a copy of "Rifle Marksmanship," and study it to see if you have any little shooting fault that needs correction. Be sure that your eyesight is

good, if necessary, consulting an oculist. And then practice at least twice a week. In this way I feel sure that you can soon reduce your average group at 100 yards to about two and one-half inches or perhaps a little closer if you have the making of a marksman in you.

#### AN OVERCHOKED SHOTGUN

I HAVE a million-dollar double barreled single trigger auto ejector Smith gun—and she doesn't pattern worth a tinker's darn! I've tried all kinds of shells—no good; about forty-five per cent is all she'll do—from that on down! Super X she blows to pieces; Minimax she spreads all over the forty yards; when she does get some kind of pattern, it's full of holes that a goose could fly through.

What in the Sam Hill is wrong? It is going to be an interesting experience before I'm through. This gun belonged to a famous old trap shot, at one time — a man who could burn more powder than any man in the State of Illinois. He had it made to order, by the Hunter Arms Company, through Simmons, of St. Louis. He was Doctor Simms, by the way, of Collinsville — a good friend of Jim Sullaway, I believe, who is the western representative and lives in your State. Maybe you know him. Well, I find that the gun has an extreme choke—the most extreme and sudden that I have ever seen. It was ordered in 1899, and though shot thousands of times, I suppose, the choke is not affected at all. I wish it was! It is like a stricture, near the fore end of the barrel. It likes not any modern load; and I wonder if I've got the right feed for her? What did they pattern with in those days, or did they pattern at all? This was supposed to be the best gun in these parts in that day; but she sure is NOT now! Why the dam Gehas, even, shoot rings all around me!

Seems to me a good shotgun ought to shoot any load. The poorer guns seem to in spite of the dope.

E. A. C.

St. Louis, Ill.

Answer (by Capt. Askins): Only two things could be wrong with your gun so far as I can see. One would be that it is chambered off center, which could hardly be true of both barrels, and the other is that the gun is over choked. Occasionally a gun is bored apparently according to specifications, that is the specifications of the gun borer in thousandths of an inch, and yet by reason of the dullness of the tools or other cause, the gun proves to be over choked. I have seen guns over choked to the extent of five thousandths of an inch which would throw a cylinder pattern, and irregular about that. I got pretty expert about diagnosing such cases while at the Fox factory, and an old chap there who knew more about gun boring than any other man I ever saw used to take such guns sometimes and fit a piece of abrasive over a spindle, taking out from one to three thousandths of an inch, whereupon the guns went right to shooting full choked patterns. When a gun is choked to the last degree there is always danger of over-choking, and such a gun is far more troublesome than if it were under choked. These over-choked guns will throw a close pattern, but not with shells having standard velocities. By way of trying this out, take some shells and load them with two and one-half drams of powder and the standard shot charge. If patterns are thrown your gun is over choked for the full charge. If you have no facilities for reloading, draw a few loads and take out all the powder, say Du Pont, except two and a half drams and an ounce and a quarter of shot. Let me know the result.

Having decided that the trouble is an over choke, send the gun back to the factory and have some of that choke removed, probably three-thousandths of an inch will be enough of the constriction to remove. I believe that you will then find your gun patterning up to standard and perhaps better, if the re-boring is carefully done.

#### SELECTING A SCATTERGUN

I HAVE read Capt. Askins' article on shotguns, etc., with much interest and look forward to his subsequent articles. May I venture a suggestion?

At present my principal participation in the gun game is a limited amount of upland game shooting. I have a sixteen gauge Lefevre of good quality. I buy my loads as sold, often the Remington Nitro Club Game loads. I often wonder how my gun performs as regards target and penetration. I have sometimes tested it at thirty yards on paper targets, but never succeeded in coming to a decision as to whether the gun was "doing as well as could be expected," or as to whether I should try some hand-loaded shells with different load and wadding.

If Capt. Askins can give us some comparatively simple method of testing our shotguns, I should certainly appreciate it. I often miss birds, and I expect to, but I hate to think that it is through some fault of the gun or the load. C. A. S.

Answer (by Capt. Askins): The Remington Game Loads are loaded to comply with a fixed standard of velocity. Any of these cartridges, regardless of the kind of powder used, ought to have this velocity. It can be assumed, I think, that this velocity will be high enough to kill at the longest ranges at which the gun can be guaranteed to throw a killing pattern. Along with this standard velocity, the Remington Company has endeavored to secure so far as this is possible, standard pressures regardless of the powder used. Even pressures ought to mean even patterns, shot after shot. You will see that the principle upon which these loads are formed is correct. Many have personal prejudices in favor of one make of powder or another, something these shells do not further, but that is another question. I think myself that their Heavy Game Load ought to be charged with progressive shotgun powers, but that is a question for the company to decide.

You have shot your gun and shells for pattern and know evidently what patterns are being made. If patterns are satisfactory, in my opinion, there should be no question about velocities, another name for penetration, and penetration combined with pattern means a killing load. It is pretty hard to get definite knowledge of penetration owing to the variations in the substances used to check up. I much prefer to be governed by the velocities as issued by the factories or by the Du Pont Company. The Remington Company would probably give you the instrumental velocity of any of their game loads, or the Du Pont Company might be induced to make velocity tests of any box of cartridges you might send them.

Comparative tests for penetration can be made with a cardboard rack. Take a rack with open ends in the shape of an oblong box. Nail strips on the sides which will hold sheets of cardboard in place. Take cardboard of any thickness you may elect to use, cut it to fit in the box, sheets about an inch apart, and put in enough of these so that the shot cannot penetrate all of them. You can in this way test the penetration of one load as compared with other loads, using the same size shot. In this way you can compare a Remington Game Load with a Du Pont  $3\frac{1}{4}$ -dram load or with a Super X load, if you want to. Get cardboard that comes in sheets of even thickness.

#### EASY TESTS FOR SHOTGUNS

AFTER hunting with various types of shotguns for twenty-eight years, including ten to sixteen gauge in double barrel, automatic and pump, I have come to the conclusion to purchase a new shot gun to serve all my shot gun hunting for the next twenty to thirty years. I want to avoid as many mistakes as possible and would, therefore, appreciate your careful consideration and advice on this problem before making the purchase.



I am just a fair dub of a shot, and while some improvement will be made in my shooting in the years to come I will never become an expert shot. For that reason I have decided that the sixteen gauge will best serve my purpose for all-around use. I want a gun that will stand up under hard usage but with good care. Although have been using a '97 Winchester pump, 16 gauge for the past six years with success, believe I prefer a double for the "one all-around gun."

I contemplate two sets of barrels, one set for use on dove and quail, and the other for ducks, turkey, etc. What length barrels and what kind of boring would you advise? Also would you have either or both sets chambered for shell longer than standard?

Which type lock do you consider the more practical, or is there any real difference so far as quality is concerned? I think the box type better looking than the side plate type, but have heard the former is harder to repair and more easily gotten out of order.

Would you recommend the automatic ejector, and what is your opinion of the single trigger for a gun of the type contemplated? About what should a gun as outlined above weigh, and would you recommend any special kind of steel for the barrels?

Finally, wish to state that I do not care to pay an exorbitant price for a gun, but am willing to pay whatever is necessary to get one that will fit me and suit my personal taste as to appearance, and that will give long service.

Assuring you in advance of my appreciation of your answers to the above questions, and any other information you care to volunteer, I remain,  
E. W. R.

*Answer (by Capt. Askins):* I have as good a sixteen bore double gun as I know how to get hold of or have made. It is a sixteen Ithaca, 30-inch barrels, No. 4 grade, costing at the time it was built, thirteen years ago, one hundred dollars, ejector, single trigger. The single trigger is not necessary unless you are used to it. The right barrel is bored improved cylinder, and the left quarter choke. One barrel will throw a fifty per cent pattern and the other fifty-five to fifty-seven per cent. I am using sixteen gauge Super X shells in this gun, loaded with 1½ ounces of 7½ shot. Gun weighs exactly seven pounds. A Silver's recoil pad would be an advantage with this load, but I have none on my gun. Gun is tight and sound after all these years of use. Sometimes I have contemplated putting another set of barrels on this gun for ducks. In that case barrels would be thirty-two inches long, bored right ¾ choke and left full. The last pair of barrels would be chambered for 2¾-inch shells. The quail barrels should be chambered for two and nine-sixteenth inch, for that is the length of the Super X sixteen bore shell. For the ducks, I would use Super X shells, too, but in 2¾-inch lengths.

I don't like short barrels myself, never shorter than twenty-eight inches in any gauge, and prefer thirty because I call shots better with the long barrels and they shoot stronger when using Progressive powders, such as are found in Super X shells.

If you are to procure such a gun as mine, you will, of course, get the box lock, same on Fox, same on Parker. I think the box lock is the strongest, the least liable to get out of order, but the hardest to get at if anything does go wrong with it. However, nothing has ever gone wrong with this Ithaca lock in thirteen years, and nothing has gone wrong with a Fox lock in eleven years of steady use, not even with the single trigger on the Fox which I have had all that time without once returning it to the factory for repairs.

My opinion of weights would be seven pounds for the thirty-inch quail barrels and about seven and a quarter for the thirty-two-inch duck barrels. The gun would balance best with the quail barrels, but the longer tubes would have less recoil, and the slight degree of muzzle heaviness would lead to steadier swinging.

I wouldn't have a double gun without ejectors, but, as I said, the single trigger is a matter of

opinion. It has the advantage of making the stock and the pull always the same, and the disadvantage of not having instantaneous selection of barrels. Makers always say the shift can be made instantaneously, but it can't, and practically one is confined to the right barrel for first shot, except that he deliberately makes the shift before getting ready to take a shot.

The Fox gun has the best lock in the world, I think, but the only difference in it and the Ithaca is a little more friction in the latter—not enough to make the difference noticeable.

#### THOSE GALLERY LOADS

**I** HAVE just obtained some gallery ammunition, .30 caliber, and would like very much to have some ballistic data pertaining thereto, none being given on the cartridge boxes.

The boxes are marked "Gallery Practice Cartridges, Model 1919; Powder American 1426; Cartridge Lot No. 292," and indicate that the ammunition was loaded at Frankfort Arsenal in March 1921. Cases are F. A. 1920 and contain a round-nosed, lubricated, cast bullet.

I would particularly like to know the characteristics of the powder especially in relation to effect on the bore, the weight of bullet, muzzle velocity, the accurate range ascribed to this cartridge, and if any variation from the regular hot water cleaning is advisable.

Any information you may give me will be received with appreciation and thanks. Stamp for reply is enclosed.  
J. E. R.

*Answer (by Major Whelen):* The following is the information you ask for relative to the Gallery Practice Ammunition, Model 1919.

The weight of the bullet is 140 grains. The mean velocity at fifty-three feet is approximately 1080 f. s. The American Powder Mills' powder is practically the same as Du Pont No. 80, and has no bad effect on the bore. The regular water cleaning will suffice. The rifle used for testing this ammunition at Frankfort Arsenal when I left there had been fired over 150,000 rounds. No wear to the bore, no erosion, or no corrosion could be noticed. It had been cleaned with cold water and a brass brush.

The average mean radius obtained in testing this ammunition from machine rest was as follows:

50 yards	-	.32 inch
100 "	-	.55 "
150 "	-	.95 "
200 "	-	1.25 "

I should say that at 100 yards this ammunition should shoot steadily into a four-inch circle. It will not, however, shoot accurately if the barrel contains the fouling of the high power ammunition.

When firing at 100 yards the height of trajectory at fifty yards is four inches, and for 200 yards the height at 100 yards is nineteen inches.

The average sight setting for this ammunition is as follows:

FOR TARGET	SET REAR SIGHT
50 yards	285 yards
100 yards	500 yards
150 yards	640 yards
200 yards	815 yards

Of course this will vary considerably with different rifles and different men. It is only a rough guide.

#### REVERSED BULLETS

**W**OULD there be anything dangerous about reversing the bullet in a .45 auto. Colt cartridge, and firing it in the automatic pistol? I wouldn't, of course expect it to function through the self-loading action. It occurred to me that this might be a good load to keep in the barrel of a pistol which is kept for home defense.

N. G. S.

*Answer (by Maj. Hatcher):* As the .45 Automatic cartridge is assembled in manufacture, the square base of the bullet rests on the cannellure, or groove in the case, which holds the bullet from being pushed in on the powder. If it were assembled reversed, the base of the bullet would strike on the rifling in pushing the cartridge into the chamber, and the bullet would be forced down into the case farther than it should be, which would result in raising the pressure, perhaps to a dangerous degree. A regular .45 cartridge in the barrel is plenty good enough for a home defense load, as it will bowl over the toughest customer, even if he is not hit in a vital spot.

#### THE QUESTION OF HOLSTERS

**R**ECENTLY the members of the Pleasantville Patrol, who beside being members of the Fire Department, are also Special Policemen, were armed with Colt .38 Police Positive revolvers, and I was appointed on a committee to determine the best kind of holsters to purchase. I would appreciate your suggestions as to the most practical kind of holster. Also a few hints as to making the members proficient in the use of the revolver and how to care for it so as to keep it in perfect working order. C. M., Pleasantville, N. Y.

*Answer (by Maj. Hatcher):* Your organization has made an excellent choice in arming with the .38 Police Positive revolver.

The kind of holster you will want depends very largely upon the kind of service your organization anticipates. If the revolvers are to be carried with civilian clothes, the most practical type of holster is the "Texas" shoulder holster, such as is shown in Sears, Roebuck & Company's catalogue on page 905, under the catalogue number of 6N1078 for 4" barrels, and 6N1079 for the longer barrel. The price of this holster is 98 cents for the 6N1078, and \$1.00 for the 6N1079.

When carried in this type of holster, the revolver is not burdensome, and is very easy and quick to draw, and at the same time its presence cannot be detected on the outside.

If the revolver is to be carried under the coat on the belt, the open top holster, Catalogue No. 6N1092, at 45 cents, for the 4" barrel, or No. 6N1093, at 55 cents, for the longer barrel, is to be preferred. When the holster is carried on the belt under the coat, there is no need of a flap, and the flap would get in the way and prevent a quick draw.

If the revolvers are to be worn with a uniform on the outside, the holster should have a flap, both to prevent the entrance of rain, snow, etc., and also to prevent the gun from falling out. A holster of this type is No. 6N1085, at 60 cents, and 6N1086, at 73 cents, depending upon the length of the barrel.

The best way to become proficient in the use of the revolver is by having enough practice for the men to thoroughly understand their weapons and get so they can shoot them instinctively.

This can be done without the use of a great deal of ammunition by setting up a short range and having a small amount of practice at regular intervals with the .22 caliber revolver, or single shot pistol. This will teach the rudiments of aiming.

Drawing, aiming, and rapid fire with the Police Positive revolver, can be practised without using any ammunition, simply snapping. It is of course necessary to use the most rigid safety precautions to avoid accidents by leaving the gun loaded in practice of this kind.

A small amount of practice with full charge is also necessary.

To care for the revolver, it is only necessary to clean the barrels and cylinders carefully after shooting with some good nitro solvent oil, such as Hoppe's then wipe the barrel and cylinder perfectly dry, and grease very lightly with a rag saturated with Winchester Gun Grease, or "Stazon."



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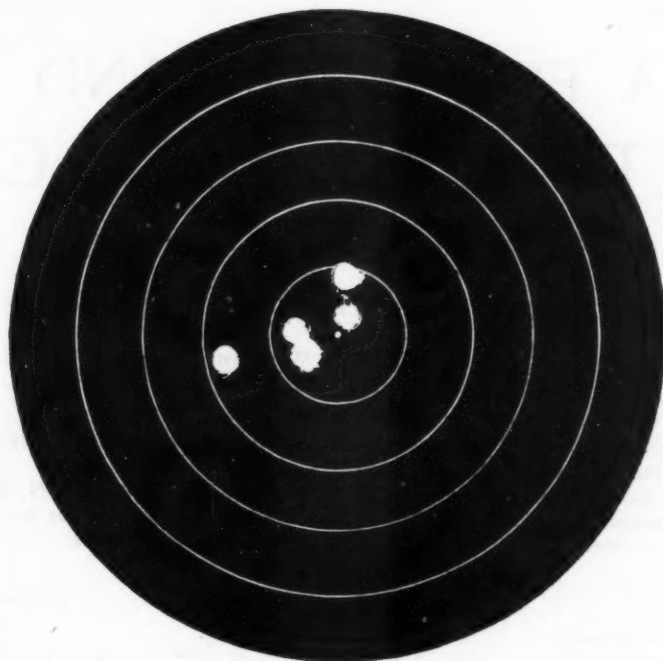
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## A Clean Sweep to Date

**T**HE 1924 program of the Metropolitan Rifle League calls for eight Re-Entry Matches on the Pope four-tenths inch ring target at 100 yards. Three of these matches have been held to date at the 47th Regiment Armory, Brooklyn, N. Y., and all three have been won by shooters using the US .22 N. R. A.

The first match of the series was won by Joseph Martin, of the Manhattan (N. Y.) Rifle Club who scored 24x25 on January 19. Mr. Martin's target is reproduced above. Pope barrel used.

The second match on January 26 and the third match on February 2 were won by John Wallace Gillies, of the Roosevelt (N. Y.) Rifle

Club. Mr. Gillies turned in a score of 22x25 on both occasions. Peterson barrel used.

This gives the US .22 N. R. A. a clean sweep to date.

It was this sure-shooting .22 which helped J. Hilborn, of the Seneca (N. Y.) Rifle Club, to register the highest score made during the 1923 Re-Entry Matches of the Metropolitan Rifle League. Mr. Hilborn shot a perfect score of 25x25 using a .22 Springfield.

Shooters find that the US .22 N. R. A. is accurate and uniform year after year. And don't forget that this famous .22 lengthens the life of your barrel because it is primed with a special mixture which is virtually non-fouling and non-erosive.

**UNITED STATES CARTRIDGE CO.**

111 Broadway

New York, N. Y.



**.22 N.R.A.**  
*Long Rifle Cartridges*

# A FEW THOUSAND BULLETS AND NEW CASES AT HALF PRICE OR LESS

28 HUNTING AND MILITARY CALIBERS—SEE IF YOUR SIZE IS HERE

These ammunition components were supplied by Winchester, Remington, U. S. Cartridge Co., and Frankford Arsenal for ballistic tests, hence are A1 grade. They are surplus stock.

Here are rare bargains. Cases and bullets are priced to move them.

Some lucky handloaders can obtain what they have often dreamed of—enough cheap ammunition for their favorite hunting rifles to develop real skill.

Even the military sizes are priced below the very bottom figures at which N. R. A. members may buy from the War Department. Quantities are strictly limited to what surplus we have. In some calibers there are only a few hundred bullets or cases.

## 7 M.M. BULLETS

Full Jacketed standard round point, weight 175 grains, diameter about .284-inch; mostly Winchester make in boxes of 25.

Price, 80 cents a hundred

## 7 M. M. EMPTY CASES

All new Primed Cases, Winchester make, in factory boxes of 25. These standard American cases are worth ten times the cheap foreign ones. They have center flash holes and take American primers—are durable and re-loadable.

Price, \$1.80 a hundred

## 401 WINCHESTER SELF-LOADING BULLETS AND EMPTY CASES NEW

New cases, Winchester, in regular factory boxes of 20.

Price, \$2.00 a hundred

Bullets, 200-grain Winchester Soft Point.

Bullets, 250-grain Winchester Soft Point.

These bullets measure about .4064-inch in diameter.

Price, \$1.35 a hundred

## 22 CALIBER RIM FIRE PRIMED EMPTY CASES AND SWAGED LEAD BULLETS

They include 22 Short, 22 Long Rifle, 22 Automatic and 22 Winchester. If interested, write.

## 35 WINCHESTER SELF-LOADING BULLETS AND NEW EMPTY CASES

New Cases, Winchester, in regular factory boxes of 50.

Price, \$1.50 a hundred

Bullets, 180-grain Winchester Soft Point, about .351-inch in diameter, (too small for use in other 35 calibers).

Price, \$1.35 a hundred

## 32 WINCHESTER SELF-LOADING BULLETS AND NEW EMPTY CASES

New Cases, Winchester, in regular factory boxes of 50.

Price, \$1.50 a hundred

Bullets, 165-grain Winchester Soft Point, about .3215-inch in diameter. Also useful in larger-bored 8 m.m. rifles.

Price, \$1.35 a hundred

Components of Self-Loading cartridges are very rarely available to handloaders. Anyone owning a S. L. Winchester should not overlook this chance to stock up, even though tools are yet to be bought. The prices are right.

## 35 WINCHESTER, MODEL 1895 BULLETS

They weigh 250 grains and measure .358-inch in diameter—the Winchester standard.

Both Full-Jacketed and Soft-Pointed. The Full-Jacketed are best for target shooting, and for the smaller game you do not want torn to pieces. These full-weight bullets serve perfectly in reduced loads.

Price, \$1.08 a hundred

## 303 BRITISH EMPTY CASES

All new Winchester cases, primed, durable, reloadable, with center flash hole, taking American primers. No cheap foreign stuff.

Price, \$1.80 a hundred

## 303 SAVAGE EMPTY CASES

Savage make, in boxes of 50; all new, unprimed.

Price, \$1.67 a hundred

All 303 Savage bullets may be used in 303 British and 7.65 m.m. rifles; also in 8 m.m. rifles with tight groove diameter.

*Orders will be filled promptly; first come first served. Terms cash with order or C. O. D.*

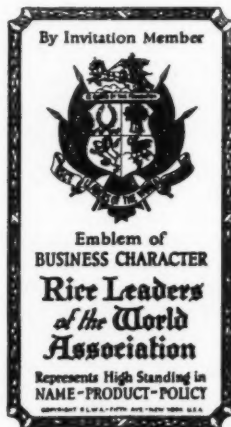
The Cases are bright, clean and in factory condition, ready for loading. They fit all rifle chambers easily, never sticking, and they hold bullets snugly. They align with the rifle bore because they have no distortion from faulty resizing. At these prices, it pays handloaders to use new cases exclusively instead of fired empties.

Why fuss with cast bullets when here are the more perfect Jacketed ones at prices as low as the cost of casting? Note that there is a liberal supply of Full Jacketed or hard nose type which are the kind needed for reduced loads and for most handloading purposes.

**Address: J. R. MATTERN, Julian, Pa.**

**Note: Your remittance will be returned immediately if items ordered are all sold. I will not substitute.**

# "Tack-Hole"— The Supreme Cartridge



"Every shot exactly where you hold"—

is the way a prominent member of the N.R.A. described "Tack-Hole" ammunition.

The extreme care exercised in the manufacture of "Tack-Hole" as in all Peters cartridges, results not in extreme accuracy simply from time to time, but extreme accuracy all of the time. Results are absolutely uniform where "Tack-Hole" ammunition is used.

Every operation in the making of this cartridge is performed with the utmost precision—nothing is taken for granted—the shell-priming composition—the bullet—the powder charge—everything must be exactly right before goods in process are allowed to continue. What's the result? Ammunition that is as near perfect as man and science can make it. Ammunition that will give every user results totally in keeping with his ability. If he holds right, his score is right.

In addition to its remarkable accuracy and uniformity, "Tack Hole" ammunition will not foul the rifle barrel. A priming mixture that is non-corrosive and non-erosive is used in Peters entire Rim-fire line.

Descriptive literature gladly sent upon request.

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Made by  
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The Name  
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**Your Rifle, Shotgun and Pistol Will Shoot  
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**B. S. A. SAFETIPASTE**—Keeps the barrel bright and right for any length of time.

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### Annual Metropolitan Handicap and International Matches for 1924

Will be held at the 47th Regiment Armory, Marcy Avenue and Lynch Street, Brooklyn. Take Brooklyn subway under Municipal Building, Chambers Street, Manhattan, the Broadway local train, to Lorimer Street, third station after crossing bridge, walk back one block to Lynch Street, turn left two blocks to Marcy Avenue.

On consecutive Saturdays, from January 19th to March 8th 1924, From 3 to 10 o'clock P. M.

**Class A.** First seven Saturdays. Any .22 rimfire rifle HANDICAP. Limited to 75 targets. Handicap determined by adding to total of best 10 of first 20 targets shot a handicap not exceeding 25 points to bring such total to 950. Final counting score will be the total of best 10 targets shot plus handicap.

For money prizes all ties will divide; for instance, if three men tie for first, divide first three moneys equally. In case of ties for medals the man with lowest handicap will win; and if still a tie, by the total of the next best 10 targets. A man may shoot any .22 rifle, sights, or ammunition, but a change in sights after the handicap is fixed will place him at scratch.

**Class B.** First three Saturdays only. The Springfield rifle substantially as issued. Limited to 50 targets. Best 10 to count. Ties decided by next best 10. Ammunition, reduced gallery loads only.

For both matches. Targets will be 100-yard N. R. A. decimal, four-inch bull. Prizes: The receipts for each match, less expenses, will be divided among at least one-third of the competitors. There will also be gold, silver, and bronze medals for the highest three men in each match.

Position prone. Spotting shots by telescope. Only ordinary padding allowed the shooter. Entrance fee for each match \$3.00. Targets 25 cents each. Nightly range fee 25 cents. Equipment will be registered on making the first entry. The Executive Committee reserves the right to make any changes in rules or conditions deemed necessary.

**Championship.** On Saturday, March 8th, 1924, the Third Annual Metropolitan Championship will be held, consisting of 50 consecutive shots, 100 yards, prone. Prizes: Cash as per Match A; gold, silver, and bronze medals to the three highest men; and the annual medal for one year. Entrance \$3.00, range fee 25 cents.

Won in 1922 by E. B. Rice, score 493; in 1923 by L. J. Cora, score 494.

**Re-entry.** A re-entry match on the four-tenths inch ring target will be held every night. Cash prizes for same paid out the following Saturday.

### METROPOLITAN RIFLE LEAGUE

President: H. M. Pope.  
Vice Pres.: Lt. Com. Leon Dickinson.  
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Brig. Gen. Bird Spencer, N. J.  
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62 West 94th St., N. Y. City.





Retail price, including tax, \$22.75

Model 19 N. R. A. Match Rifle—.22 caliber, repeating bolt action rifle. 25-inch round barrel, aperture rear sight with windage and elevation adjustments and Marine Corps type front sight. Full military stock, oil finished, pistol grip, band and swivels for sling strap. Short hammer-throw. Detachable box magazine, capacity 5 cartridges. Regularly chambered for .22 long rifle cartridges. Can be furnished chambered for .22 short cartridges on special order. Weight about 7 pounds.

## The new N. R. A. Match Rifle—

Suggested by America's greatest experts—Now made with the latest improvements known to the art of gun making

A rifle designed to meet the suggestions of the best known and most skillful riflemen in the country—that's the Savage N. R. A. Match Rifle.

The barrel is rifled with the most careful precision in the special Savage way. Throughout, the best features of the finest military rifles have been built into this record-breaker. Just pick it up for a moment. Notice the full military stock, the beautiful balance and "feel" of this rifle.

Now take a sight on some object. Holds steady as a rock. With this rifle you will get every last fraction of an inch in actual results for every shot you fire. And when you're in a prone position you'll find that this match rifle works easily—smoothly.

Just examine the bolt action. Modeled after the finest military rifles but with an unusually swift throw. Half-cocked on the opening stroke—full-cock when you drive it home—just glides along, it's so smooth. And the opening stroke ejects the empty shell, throwing it to the side and away from the shooter.

And in your handy little detachable box magazine you have five .22 long rifle cartridges.

The sights of the Savage Match Rifle are specially designed for fine work on small bore ranges—a sturdy German-silver front sight with an undercut rear surface to insure clear sighting under any light conditions and a graduated peep rear sight with windage and elevation screws for adjustments up to 200 yards.

If you like telescopes—the Stevens No. 468 is especially adapted to the Savage Match Rifle. Can be attached with a screwdriver without drilling or tapping holes in the barrel.

For any kind of shooting on a small bore range you can't beat the Savage N. R. A. Match Rifle. Equally good for carefully timed single shots or for rapid fire, it has become the rifle used by experts as an understudy to a military rifle and to establish new world records for .22 caliber competitions.

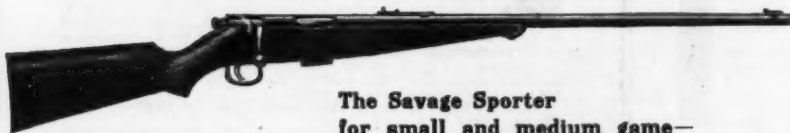
And look at the price—\$22.75—you can't beat that either. Ask at your dealer's or write us today for interesting catalog.

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Dept. 677, Utica, N. Y.

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## SAVAGE



The Savage Sporter  
for small and medium game—

The same action as the N. R. A. Match Rifle built into a trim sporting model. 23-inch barrel, flat top sporting sight. Just the rifle for all kinds of pests and small and medium game. Now made in three calibers:—

Model 23 A — .22 Cal.	\$19.50
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## FIALA PAT. SLEEPING BAG

Weight 5 lbs.—warm as 30 lbs. of blankets. No hooks, strings or other crude contraptions.

Read What They Say:

"Without doubt, you have the best light weight bag on the market." Dr. C. P. Fordyce.

"After 28 years camping in nearly every part of our country—trying out many kinds of sleeping bags, I can congratulate you on having the lightest and warmest bag I have ever seen." J. M. Murdock.

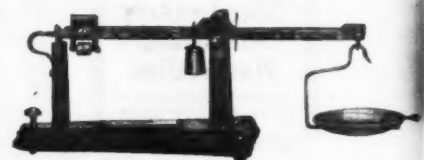
FIALA Outdoor Sleeping Suits of pure "Angora" worsted.

FIALA Parkas and Sweater Coats for Skiing and Mountaineering.

FIALA High Grade 22 cal. Combination Rifle and Pistol, with 3 barrels, a \$30 Rifle for \$18.

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Anthony Fiala, 25 Warren St., New York  
FIALA OUTFITS Inc.



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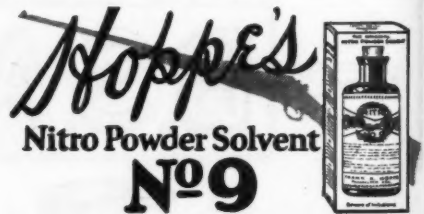
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Get it from your Dealer. Or send us 10c in stamps for sample. Ask us how to keep your rifle, shotgun, pistol in perfect condition

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Marble's Nitro-Solvent Oil dissolves residue of all black and smokeless powders, including Cordite. Acts instantly—stops corrosive action—removes and prevents rust and cuts off dirt and gum. It's a perfect polish as well as a lubricant. Extensively used in the army 2-oz. bottle 25c; 6-oz. can 50c. Postage 10c extra. Direct by mail if your dealer hasn't it. Catalog of Marble's 60 specialties free.

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Everything to interest a rifleman. Send for my No. 6 Catalog, just out, showing over 200 cuts and complete Price List.

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Cal. 45  
5 1/2" Barrel



U. S. Marine Corps Model  
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These revolvers have been issued for service. All are in first class serviceable condition; some are practically new, others have the bluing somewhat worn. While they last

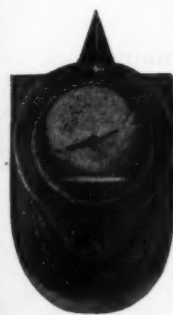
Those practically new, - \$30.00  
Those showing bluing worn, 17.50

Cartridges for same, Winchester Cal. 45, \$2.25 per box of 50. Send for Catalog of arms and out-of-the-ordinary things.

W. Stokes Kirk, 1627-A.G. N. 10th Street, Philadelphia

## U. S. Government Marching Compass

\$24.50 value, While they last at \$1.75



This is a brand new day and night compass made by Sperry Gyroscope Co., for U. S. Government. Luminous Dial is suspended in spirits, focusing eyepiece. Furnished with plush lined

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## Our Rifles Have the Finest Accuracy

They are chambered as closely as is consistent with ready insertion and extraction of the cartridge. Our methods insure the chamber being exactly in line with the bore, and a groove diameter never differing from standard more than .0002-inch. The throat fits the ogive of the bullet perfectly. As a consequence, see the work they do. The group shown by with one of our 7 m. m. rifles by an officer of the

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shown by the large circles was made at 200 yards with one of our .35 Whelen rifles by a member of the Camp Fire Club of America. These are not machine rest groups.

They were fired off shoulder with strictly hunting rifles equipped with Lyman sights.

Send for our literature, including our new superbly illustrated circular showing our various types of rifles.

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Distinctive medals for club matches are useful PRIZES THAT LAST.

Well arranged rifle and pistol programs which offer correctly-made medals will stimulate interest in club activities and increase the membership.

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**Business cards and display** in this column accepted at the rate of \$2.50 an inch. No space less than an inch sold for display.

**ANTIQUE AND MODERN FIREARMS** (new and used) sold, exchanged, and bought. Large stock—reasonable prices! Stephen Van Rensselaer, 873 Madison Avenue, New York City.

**RECENTLY RECEIVED** an unusually fine collection of Moro and Igorot Philippine weapons including kampalings, barongs and shields. Each specimen is a collectors' piece. The Old Georgetown Guild, 2722 M Street Northwest, Washington, D. C.

**FOR SALE**—Pair masked butt Revolutionary period officers' pistols by Thomas. Hair line inlays in silver wire. Complete and original except one has slight repair to stock at lock. Price, \$20.00. Box 6, THE AMERICAN RIFLEMAN.

**FOR SALE**—One pair superfine double barrel flintlock carriage pistols by Wilkinson, London. Of finest workmanship and perfect in every detail. Price, \$90.00. Box 12, THE AMERICAN RIFLEMAN.

**FOR SALE**—Sporting top musket tubes or nipples, breechloading gun lock. Many other obsolete parts. Send sample of what you want. F. Surkamer, 54 W. Lake St., Chicago, Ill.

**WANTED**—Rare Colt's or one with shoulder stocks or ivory grips. Send price and description in first letter. Fred Hines, 60 Congress St., Boston, Mass.

**"FIREARMS OF YESTERDAY"** are a specialty with "THE OLD GEORGETOWN GUILD." At all times there are on hand a large number of specimens from which to select examples of early American, Confederate States and European firearms. Tell us what your collection needs. We will probably be able to help you. The Old Georgetown Guild, 2722 M Street, N. W., Washington, D. C.

**FOR SALE**—Thirty arms by Colt, S. & W., Forehand, Winchester, Marlin, Ballard, Maynard, Sharps, Springfield, etc., \$2.00 to \$20.00. Also a few percussion arms, a fine cartridge Le Mat, an Osgood .22-32, 10 shot Lefauchaux, etc. List for stamp. C. H. Goodard, Johns Hopkins Hospital, Baltimore, Md.

**SPECIALIZING**—In the repair or restoration of antique arms. Commissions for sale or purchase in Europe or America. Forty-year walnut blanks. State size. Albertson, Lewes, Delaware.

**FOR SALE**—One French Colonial flintlock horse pistol, period about 1690-1710, with Auroy burned in stock. In good condition. Price, \$7.00. Box 8, THE AMERICAN RIFLEMAN.

**FOR SALE**—One brass octagon barrel flintlock pistol, in perfect condition, marked Tower period about 1750 by Sharpe. Price, \$8.00. Box 10, THE AMERICAN RIFLEMAN.

**FOR SALE**—2,000 antique firearms at reasonable prices. Send six cents in stamps for 24-page price list. Let me know your special wants along any line of antique firearms. I am always anxious to buy single specimens or entire collections. Joe Kindig, Jr., 336 West Philadelphia Street, York, Penna.

**FOR SALE**—Pair of very fine German duelling pistols, .44 caliber, muzzle loading, 8-inch barrels, rifled with very narrow grooves and lands. Beautifully engraved and gold inlaid, set triggers, adjustable sights. Excellent condition. The case for these pistols is in poor condition, but capable of being repaired. Some of the tools are missing. Price for the outfit, \$60.00. C. E. Stodter, 1115 Woodward Bldg., Washington, D. C.

**WANTED**—A flintlock Kentucky rifle, in condition for shooting. Must be good. Give full description and condition, together with price. T. G. Samworth, THE AMERICAN RIFLEMAN.

**WANTED**—Good examples of early Kentucky flintlock rifles and carved powder horns. Send description (photograph, if possible) and price. J. G. Dillin, 102 West Front Street, Media, Pa.

**WANTED**—a double barrel flintlock shotgun, in good condition. Give complete description, condition, and lowest price. T. G. Samworth. THE AMERICAN RIFLEMAN.

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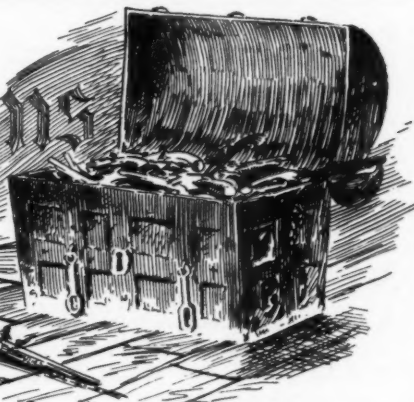
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THE uniformly excellent returns from advertisements appearing in the classified columns of THE AMERICAN RIFLEMAN make it a most satisfactory and productive medium for the disposal of surplus shooting equipment, or the acquisition of special types of firearms.

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**FOR SALE OR TRADE—D. H. E. Parker** 12 gauge 30-inch barrels, right mod. left full stock 15-8 x 2 1-4 x 13 5-8, beautifully engraved and in new condition, \$100.00. C. E. Grade Lefever 20 gauge 28 inch barrels auto. ejectors, single trigger, jotsom pad barrels right mod., left full, beautifully engraved, and in perfect condition, \$95.00. Trap grade Smith auto. ejectors, recoil pad, 32 inch full choke barrels, factory condition, \$80.00. .38 Colt's officers mod. six-inch barrel target sights, factory condition. Reloading tools for Bond handles (no handles). 450 Winchester bullets for same in factory boxes for reloading, \$35.00 for lot. .22 Colt's police positive six inch barrel, target sights, perfect condition, \$15.00. Two 1922 model pistol grip stocks for Springfield as issued—one beautifully checkered and finished, slotted for Lyman No. 48 long slide, \$10. Other plain but slotted for Lyman No. 48, \$5.00. Knob type scope mount for Springfield rear sight base, double bar, and with Winchester mounts bradded on, \$8.00. Krag rifle semi-sport stock, new barrel recoil pad, new Marble receiver, rear Sheard front, about 250 rounds Remington 17 ammunition, some new Winchester cases and extra bolt, \$15.00. Or will trade for S. & W. .45 Colt's 1917 in new condition. Dunlap Roddey, Box 392, Rock Hill, S. C.

**FOR SALE—Copies of "THE AMERICAN RIFLEMAN"** complete 1922 and 1923 at \$2.00 per year. 120 cartridges .45 caliber smokeless, for use in Colt New Service revolver, \$2.40 for lot. One Ideal tool D. A. chamber caliber .45 Colt and Ideal Mold 454190 new condition \$4.00 both. 145 bullets .32-20 S. P. 115 grain \$1.45. Cal. 45 Colt S. A. revolver 5 1/2 inch barrel blued \$15. Want Speed Graphic Camera 4x5 with or without lens in new condition, or high grade, 4x5 folding camera. State if case holders, etc., are with camera. Send stamp for prompt reply. R. W. Kent, P. O. Box 393, Alameda, California.

**FOR SALE—Jackson's Hole Ranch.** 1270 acres, 4 cabins (3 good), blacksmith's shop, machine shed, cattle sheds, large barn, corrals and stock yards, fine for boys' camp, dude ranch, club or stock, good fishing, hunting, trapping, etc., beautiful place and bargain, at \$10.00 per acre. R. B. Harkness Route 4, Box 128-C, Murray, Utah.

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**WANTED—45 Colt automatic.** Government model of '11, must be mechanically perfect and reasonably priced, appearance of gun and condition of barrel of no importance. Dr. Emil Specht 67 Hanson Place, Brooklyn, N. Y.

**FOR SALE—Vega style "K" Mandolin-Banjo,** new cost \$35.00. Take \$25.00. Jesse Hartzell, Grinnell, Iowa.

**FOR SALE—One .38 Special Smith & Wesson** Military and Police Square Butt Revolver. Patridge sight. New, never been shot, with officer Sam Brown belt and high-grade right-hand leather swivel holster, with flap and leg strap. Also one set Ideal No. 3 Special reloading tool with separate Ideal bullet mould No. 358311. All the above brand new and never been used. An outfit any gun crank can be proud to own and the price is \$40.00 for a quick sale. Theodore Farnsworth, 118 E. 2nd St., East Liverpool, Ohio.

**FOR SALE—22 Colt Automatic, holster,** extra magazine, \$17.50. 30-40 Winchester repeater, \$19.50. 32-40 Winchester Repeater, \$14.50. .38 Special barrel, \$3.50. Heiser shoulder holster, \$3.50. Hardy fancy belt .38 caliber, \$3.50. Fancy studded holster, \$2.50. 32 H & R revolver 6-inch target grips, \$7.50. 300 Argosy and Detective Story magazines, \$10.00. 300 Sporting magazines, \$10.00, rotation. 41 Colt Army Special, \$17.50. Guns used, good, accurate, satisfaction guaranteed. H. Z. Holliwell, Schroon Lake, N. Y.

**FOR SALE—One Winchester Model '73** Carbine .32-20 cal. One Remington Single Shot .32-20. One S. & W. Single Shot Model '91 .22 caliber, 8-inch. One .410 Shotgun. All above like new. One Winchester Model '73 .38-40 cal. One .50 caliber Remington Pistol. One .32 Marlin Revolver. One Model 92 Winchester .25-20. One .25-35 Winchester. One set .38-40 loading tools. All above in good condition. Best offer takes the goods. Oluf Bearrood, R. 2, Luck, Wisconsin.

**FOR SALE—Model 53 Winchester** with blocks for Winchester scope. Excellent condition inside, but somewhat worn outside from squirrel hunting and carrying around in automobile. Specially selected star-gauged Springfield, cal. .26. Practically new. Perfect inside and out, \$35.00. Dr. Urling C. Ruckstuhl, 819 University Club Bldg., St. Louis, Missouri.

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**FOR SALE—Colt's Frontier Model .38-40,** good condition having new 5 1/2-inch barrel, holster, rawhide-laced belt, new, unused Ideal No. 4 reloading tool. 300 empties. \$24.50. W. L. George, Cedar Rapids, Iowa.

**FOR SALE—One No. 13 B. E. A. super-accurate** Match rifle, complete with No. 18 front sight and No. 8-A 6-hole peep sight. This rifle is new, \$35.00. Box 3, THE AMERICAN RIFLEMAN.

**FOR SALE—Ideal No. 4 reloading set, caliber** .38-40 complete with mould, dipper and decapping pin. Brand new. Never used. Price, \$4.50. William Tompkins, Cooks Falls, N. Y.

**FOR SALE—One new star-gauged .30 caliber** barrel for Springfield, \$10.00, or trade for accurate powder scales or powder measure. Howard L. Shaw, East Stroudsburg Pa.

**FOR SALE—One Winchester take-down** Model 95, cal. 30-03, Lyman receiver sight and ivory front sight. Good condition, accurate, \$25.00. J. S. Rogers, Pilmore, Wyoming.

**FOR SALE—38 Colt Military Auto., \$19.00.** .38 Colt Officers' Model, 6-inch barrel \$22.00. .45-1917 Colt, \$18.00. .38 Smith & Wesson single action, pearl grips, 3 1/4-inch barrel, \$7.00. 32 Harrington & Richardson Hammerless, 3-3inch barrel, pearl grips, \$6.00. 45 Colt Military Auto. \$14.00. .25 Colt Automatic, \$3.50. .32 Colt Automatic, \$11.00. Browning .25 Automatic, \$6.00. .25 caliber Zebra, Suhl, automatic, \$6.00. Webley .455 English Service Revolver dated 1918, \$17.00. 9 mm. Luger four-inch barrel dated 1914, \$17.00. 45-70 Remington-Lee Sporter, checkered pistol grip 26-inch barrel, \$12.00. New Ideal Mould No. 358311 at \$1.75. New Winchester .25-20 Single Shot tool, \$2.00. 36-30 Ideal Tool including mould minus chamber, \$1.50. New Ideal Dipper, \$1.50. 4 x 5 Auto. Graflex, plate magazine, Steinhell, Munchen 4.5 lens, worth about \$125.00—take \$50.00. 6X Bush, Rodenstock and other makes used monoculars, prismatic, at \$6.00 each. Same by Carl Zeiss, \$12.00. Same by C. P. Goerz, \$10.00. 8X by C. P. Goerz, \$12.00. A few new "Metami" M. Hensoldt & Sons, Wetzlar, 25X to 600X. Portable May take microscopes at \$18.00 each. 18 x 50 Carl Zeiss Prismatic Binoculars in case, value \$147.50—take \$70.00. 4 x 20 C. P. Goerz Prismatic Monoculars with case at \$4.50. 12-gauge 1912 Winchester ribbed 24 1/4-inch modified barrel, \$10.00. 12-ga. Mm. Powell & Son, Birmingham, double hammer, 26-inch barrels, modified, \$28.00. 6 x 22.2 Carl Schutz Prismatic Binoculars, case, strap, central adjustment, \$17.00. C. O. D. Parcel Post, if desired. Stockbridge Sporting Goods Co., Stockbridge, Mass.

**FOR SALE—Stevens heavy target rifle** with 6x scope, chambered for .22 long rifle cartridge, Swiss butt, set triggers, \$22.00; Reising .22 Automatic, \$23.00; Colt .32 Police Positive, \$19.50; 6x day and night field glasses, with case and strap, \$12.50; everything guaranteed. Bargain list of ammunition, antique guns, etc., for 6 cents in stamps. **WANT—A breechblock, firing-pin and grips** for new model Luger. F. J. Valente, Mansfield, Massachusetts.

**FOR SALE—One .32-20 cal. Smith & Wesson,** 6-inch barrel like new, \$22.00. One brand new barrel and receiver assembly for Springfield .06, \$9.00. One .25 cal. Mauser Auto. pistol, fine condition, \$10.00. All the above arms in "gun crank" shape, or money refunded. **WANT—Bond Tool** for '06 cartridge, also scales and Modern-Bone powder measure. Robert S. Brodhead, Strafford, Penna.

**FOR SALE—Stevens No. 44 1/2, .32-40 superac-**curate 27-inch barrel heavy No. 3 tapped for scope fitted with single set triggers and good peep sights, 3-ply cushion butt plate. \$12.00. Parcel Post, C. O. D. O. P. Stoner, Seely Lake, Montana.

**FOR SALE OR TRADE—4 Sharp's Buffalo** rifles, shells, tools, etc., 45-70 top action, Marlin Repeater, fine, \$15.00. Cummings 8-power scope \$10.00. 43 tanned muskrats, \$60.00. Write for descriptions. Elmer Keith, Winston, Montana.

**WANTED—Position** as manger on hunting or fishing preserve or game farm. American, married, distance from R. R. no objection, willing to go anywhere if permanent, best of references. Address P. O. Box 56, Camden, South Carolina.

**WANTED—A high-grade spotting scope,** capable of spotting 22 holes at two hundred yards. At least a two-inch objective lens. Cash or trade an 1892 Winchester .25-20 octagon. W. R. Spellum, Viroqua, Wisconsin.

**FOR SALE**—30-40 Winchester Mod. 95 rifle, 24-in. barrel same dimensions as .405 barrel without rear sight slot, Roosevelt pattern fancy walnut stock and forearm with cheek piece, finest piece of walnut I have ever seen on a rifle, checked steel shotgun butt, Marble flexible rear sight on tang, gold bead front sight, detachable sling swivels, new, \$50.00. .33 Winchester Mod. 86 rifle, special fancy walnut pistol grip stock and forearm 1 3/4 x 3 3/4 x 13 1/2, Schoenauer steel shotgun butt plate with trap, extra short magazine and forearm completely hiding magazine, Lyman 103 rear sight, folding leaf, and gold bead front, detachable sling swivels, with Ideal reloading tool complete, new, \$50.00. .303 Savage Mod. 99 rifle, 26-in. round very accurate barrel without rear sight slot, take down, receiver matted and engraved, excellent dull London finish fancy walnut pistol grip stock and forearm, steel shotgun butt, swivels and sling strap, Lyman wind-gauge rear and gold bead front sights, new, \$50.00. .250-3000 Savage bolt action rifle, Lyman 103 sight on cocking piece, extremely accurate .257-in. barrel, swivels and sling strap, new, \$40.00. .22 LR Winchester Mod. 52, Lyman 48 rear sight, stock built up by serviceable gluing to excellent proportions, 1 3/4 x 3 x 13 1/2, with heavy engraved steel shotgun butt plate, superb accuracy, second place Dewar International Match 1921, practically as good as new, \$35.00. .25 R. F. Remington No. 4 rifle with Lyman sights, new, \$10.00. Above rifles have been sighted in and accuracy test fired, otherwise they are new, and all are extremely accurate. Winchester single shot heavy action and stock, take-down, center-fire, double set triggers, extractor for .25-20 S. S., Lyman wind gauge sight on tang, stock is plain walnut checked pistol grip steel shotgun butt, new, \$18.00. Townsend Whelen, care THE AMERICAN RIFLEMAN.

**FOR SALE OR TRADE**—Two Model 1912, 12-ga. 28- and 30-inch Winchester pump guns, never fired, \$45.00 each. One new, one almost new. .250 bolt action Savage rifles, \$40.00 and \$39.00. One Model 1897 12-ga. 30-inch Winchester take down, new, never fired, pump gun, \$39.00. One Remington 12-ga., 30-inch, new, never fired, pump gun, model 10, \$44.50. One .22 Colt Automatic, very good condition, inside perfect with gold bead and Heiser scabbard, \$22.50. One .38 Colt Officers' Model 7 1/2, new, \$33.00. One Victory grade, 12-ga. 34 inch Ithaca single trap, silvers pad, new, \$45.00. One 16 size 23 jewel Vanguard Waltham 25-year case perfect, \$50.00. One 30-inch Hart-Andrews .30-06 cal., 1 1/4 x 3/4 barrel and receiver, tapped for 48 sight, military front sight, barrel, new condition, not blued, \$35.00. One No. 47 Stevens beaver tail forearm, scope blocks, .22 cal., perfect inside, no stock, regulation globe and peep sights, \$20.00. Two A-5 Winchester scopes, \$24.00 each, with No. 2 mounts. One Winchester 52 superaccurate \$30.00. Will send C. O. D. subject to examination all above guns. **WANT**—Heavy barrel and receiver, or complete heavy rifle, 24-, 26-, or 28-inch barrel, not under 3/4 at muzzle. Must be new and perfect inside—.30-06 caliber. **WANT**—.22 Springfield, new, never fired, Model 1922. Must be sent subject to approval. Jim Wade, Box 493, Sheridan, Wyoming.

**FOR SALE OR TRADE**—Winchester Shotgun, Model '97, 12-ga., 32-inch, 17-62 remodeled Russian rifle. One Iver Johnson .32 revolver. One small Schuetzen butt plate, one 8 x 10 studio portrait outfit, one 11 x 14 view camera, one 5 x 7 Pocco triple extension camera. I want Krag carbine barrel, .22 Marlin rifle, Model 39, Ideal Lubricator and sizer with die for .38 S & W Special, as issued Springfield 1903. N. L. Walstad, Milton, North Dakota.

**FOR SALE OR TRADE**—Remington 12 pump 22 inch full, perfect, \$40.00. Remington 12 Auto, perfect, \$50.00. 1917 S. & W. .45 cal. Service Gun, perfect, \$25.00. All are like new and guaranteed. **WANT**—High grade heavy 10 ga. duck and goose gun, Winchester 12 Auto. Reising .22 cal., must be perfect with privilege of examination. Will exchange also pay difference, according to value. C. F. Johnson, Delhi, Minnesota.

**FOR SALE**—Winchester 52, \$31.50. U. S. 1917 Winchester make, \$22.50. 7 m. m. Spanish Mauser, made by Lowe, Germany, \$25.00. 3 barrel hammer, 10 ga., .44-40, \$40.00. Or what have you? H. D. Fessenden, North Fairfield, Ohio.

**FOR SALE**—One '06 star-gauged Springfield Sporter. Absolutely first class condition. Send two cent stamp for photo and description. Price \$50.00. C. H. S. Bate, 191 So. Marina St., Prescott, Arizona.

**TRADE**—Pre-war .32 Auto. Savage, holster worn, otherwise perfect and give boot for Colt D. or S. A. 38-40, 44, 45 same condition or sell \$10.00. R. Osmond, Cortland, N. Y.

**WANTED**—High-grade foreign guns. Guns with barrels bursted. State condition and price. F. Surkamer, 54 W. Lake St., Chicago, Ill.

**FOR SALE**—One Winchester S. S. Musket, .22 L. R. No. 53 Receiver sight. In original factory grease, \$25.00. One .32-40 Ideal 165-gr. mould, \$1.00. One Winchester No. 4 barrel, 32-40 cal., 28-inch octagon. Threaded for Martini action, \$2.50. One Globe target front sight, with spirit level, Standard Slot, \$1.50. Two Vernier rear sights for Ballard or Marlin tangs, 75 cents each. One No. 53 receiver sight, new, \$3.00. One No. 2 Lyman for No. 12 Remington, new, \$3.75. One Krag rifle, No. 1 Lyman on cocking piece. Set in pistol grip and remodeled stock, shotgun butt, amateur job but nicely done, barrel perfect on inside \$17.50. Frank Ridgway, 512 West 6th St., Peru, Indiana.

**WANTED**—Old gun catalogues. **FOR SALE**—Remington-Heppburn .45-70 rifle, good order, \$7. English double M. A. shotgun, gauge, good order, \$5.00. Cartridges .40-70 Sharps and Ballard .40-90, B. N. Sharps, .44-77 Sharps, 6 cents each. Reloading tools .32-20, 32-40, 38-35, 38-56, .40-60 Marlin, \$2.50 per set. Tool only, .32 Win-Special, \$1.00. Win. Mould .45-70, .405, \$1.60. .47-70 .330 Mould, \$1.00. Gunsmiths' cherrire for making bullet moulds, 60 cents each. Fred Wainwright, Grayling, Michigan.

**FOR SALE OR TRADE**—92 Winchester .25-20 Lyman and Sheard sights, \$25; Ideal Mould and tool, .38 S. & W. Special \$4.00; Ideal Mould and Tool for .250-3000, 150 Lubaloy Bullets, 300 primers, 20 new primed shells, \$5.00. **WANT**—Spotting Scope, .22-32 S. & W. Colt's A. M. 7 1/2 inch. .22 Pistol Colt's S. A. Army or Blisley .38 Colt's. Ideal Powder Measure. W. M. Hire, Castalia, Ohio.

**FOR SALE**—Fine, made-to-order target rifle by the Savage Arms Corporation. Just received from the factory, caliber .250-3000, bolt action, 26-inch heavy barrel of Savage high pressure steel, Lyman sights, star-gauged, fine stock weight 8 lbs. Guaranteed perfect. Cost \$85.00—first \$55.00 takes it, or ship C. O. D. on receipt of \$3.00. Henry F. Zinner Middleburgh, Scho. Co., N. Y.

**FOR SALE**—One 1903 Springfield, cal. .30-06, first-class condition. One .38 Colt Automatic, military model, new, 100 cartridges, one extra magazine. One .25-20 Remington repeater, Model 25, Lyman peep, Marble folding leaf, set reloading tools new and perfect, all cheap for quick sale. W. M. Gantt, Box 54 Elmore, Ala.

**FOR SALE**—Westley Richards 12-gauge trap gun; 30-inch barrel with full-length matted rib; automatic ejector, inside perfect, outside good; said to have cost \$350.00; sell for \$150.00; high grade .22 L. R. Schuetzen will be accepted on a trade. Dr. G. R. Hays, 403 Second Nat'l Bank, Richmond, Indiana.

**FOR SALE**—Fine '74 Model Sharps, 40 caliber. A perfect specimen, \$15.00. '94 Model Winchester .30-30 finest fancy P. G. checkered stocks, fine, \$35.00. Remington-Heppburn .25-21 Lyman rear sight, 60 ctgs., 300 bullets, perfect inside, outside good, \$25.00. S. B. Wetherald, Sandy Spring, Md.

**FOR SALE**—New Sporting Rear Peep Sight for Savage 1919 N. R. A. 1-16 or 3-32 aperture. Each \$1.00 postpaid. Tested and approved by Savage Arms Corporation. Aperture over cocking piece and close to eye. Will not fit Sporter unless you have N. R. A. sight base. C. E. S. Sight Company 69 E. Welch Ave., Columbus, O.

**FOR SALE**—Colt .22 automatic, \$22.50. S. & W. square butt .38 special, \$25.00. Colt .45 single action 7 1/2 inch \$15.00. Krag \$3.00. Ithaca Double 4 E. Silvers pad and Lyman Ivory sights, open and full, \$100.00. All fine condition, first Money Order or check gets them. Dr. Miller Wells, Chester, W. Va.

**FOR SALE**—Dantsig 1911 Mauser 7.9 m.m. rifle, barrel good inside, outside and action fine; new .38 S. & W. checkered stock, shotgun butt plate. Sell for \$25.00 or trade for Colt .22 automatic or 5-inch Police Positive .38 special. Lyman No. 103 tang sight, new, \$5.00. Perry Fraser, Ridgewood, N. J.

**FOR SALE**—A quantity of Springfield ammunition, besides one unbroken case; or will trade for 45 Government Pistol or cartridges for same. E. B. Witwer, Suite 62, La Fayette Bldg., 138 N. La Salle St., Chicago, Illinois.

**FOR SALE**—New Bond parts for 7.65 m.m., Luger etc. Never used and guaranteed perfect, \$5.00. 250 full jacketed bullets for 7.65 m.m. Luger, \$1.50 or parts and bullets, both for \$6. Leale Gilmore, Fairview, Illinois.

**FOR SALE**—Model 52 Winchester rifle, in good condition. Price \$20.00. A. Perry, R. F. D. No. 6, Box 223, Lancaster, Pa.

**FIR SALE**—Savage Bolt Action Rifle, cal. .250. Fitted with Marble peep sights. Set of straight line reloading tools 100 loaded cartridges, 900 No. 8 Western primers. All above in new and crack condition, price \$65.00. Remington .22 cal. Autoloading rifle, Model 16, 15-malcolm sighted, fine condition, price \$22.50. Wm. Malcolm Telescope sight, length 17 inches, 15 diameters, good condition, price \$10.00. Colt .22 cal. Automatic pistol and holster, 10 inch barrel, superaccurate, crank condition, price \$40.00. Winchester Model 1892, cal. .32-20 solid frame, oct. bbl., fine condition, \$20.00. **WANT**—Winchester No. 52 rifle power scope. Also Remington Model 25, cal. .25-20. Smith & Wesson Butt with Partridge adjustable target sights, cal. .32-20. Any gun offered must be in new or crack condition. Inclose stamp. C. V. Ligget, R. D. No. 1, Avella, Penna.

**FOR SALE**—New 6.5 m.m. Mannlicher-Schoenauer rifle, never fired, 22 inch barrel, Poldi Anticorro steel; all finest French walnut stock; beautifully engraved floor plate and trigger guard, buck deer and cougar; Lyman Ivory bead front sight and bolt peep sight, modified Whelen sling of latigo leather, trap in butt with cleaning rod. Price \$100.00. Perfect condition. N. F. Harriman, Rm. 310 South Bldg., Bureau of Standards, Washington, D. C.

**FOR SALE**—Cheap. Winchester Model 1912 shotgun, 20-gauge, brand new. Remington rifle, Model 14-A, .35 caliber, grip checkered and sling swivels attached, brand new. Make cash offer for either or both. **WANTED**—Reloading tools for 7 m.m. Mauser, also male black and tan rat terriers about 5 months old. Stamp for reply. P. R. Westover, Frugality, Cambria Co., Penna.

**FOR SALE**—7.62 m.m. cartridges, full pack, \$1.10 per hundred. Expanding point hunting bullet loads, \$4.55 per hundred. Krag ammunition, full pack, \$1.35 per hundred. Weiss B-nocular 7 x 25 military pattern with case like new, \$22.25, postpaid. Arthur E. Anderson, Fullerton, North Dakota.

**FOR SALE**—Winchester 5-A telescope, cross hair reticule and leather case, without mounts, new condition, \$23.00. Krag rifle and sling, very good, \$10.00. New .45-70 round barrel for Winchester \$2.50. I. M. Massey, 337 East 2nd St., Sheridan, Wyoming.

**FOR SALE OR TRADE**—Bristol De Luxe Fly Rod, extra tip, De Luxe glove leather, silk lined, case all in good shape. Will trade for Colt .22 Target Model Automatic pistol. Must be in A-1 condition. E. J. Hofheinz, Box 544, Austin Texas.

**FOR SALE**—.45 Colt's S. A. Army, 5 1/2-inch barrel, wood stocks, easy trigger pull. Inside of barrel and cylinder perfect. Outside bluing somewhat worn. \$15.50, delivered. H. N. Spencer, 1601 Railway Exchange Bldg., St. Louis, Missouri.

**FOR SALE**—Kodaks, Graflex cameras, lenses, binoculars at lowest prices, new and slightly used. We take your camera or high-grade firearms in trade. National Camera Exchange, 7th and Marquette Sts., Minneapolis, Minnesota.

**TRADE**—.38-40 Blisley, 5 1/2 perfect. .32-20 1892 Winchester, receiver sight, new barrel. **WANT**—Savage N. R. A. and Savage new bolt action .32-20. Guy L. Walster, Larimore, North Dakota.

**FOR SALE**—.30 Newton and 150 cartridges for \$60.00. Gun fired five times and is in factory condition. Earl R. Beringer, 1324 Atlantic Ave., Monaca, Pa.

**CHECKERING TOOLS**, handmade, for amateur or professional, that do real work. \$5.00 per pair. C. B. Keller, 618 Denison St., Baltimore Md.

**WILL EXCHANGE**—My 5 1/2 barrel nickled .45 Colt for the same in 7 1/2 barrel blued. Martin J. Carlson, Barry, Minnesota.

**WANTED**—Gunsmith. State age, wages and experience. F. Surkamer, 54 W. Lake St., Chicago, Ill.

**WANTED**—Ideal Bullet Mould for 125-grain pointed bullet, .32-40 caliber. Must be in good condition. John C. Bruns, Box 74, Dixon, Cal.

**FOR SALE**—Winchester Model 1895, cal. .24 Government '06, new condition. Price, \$32.00. H. Carlson, 122 Longwood, E., Detroit, Mich.



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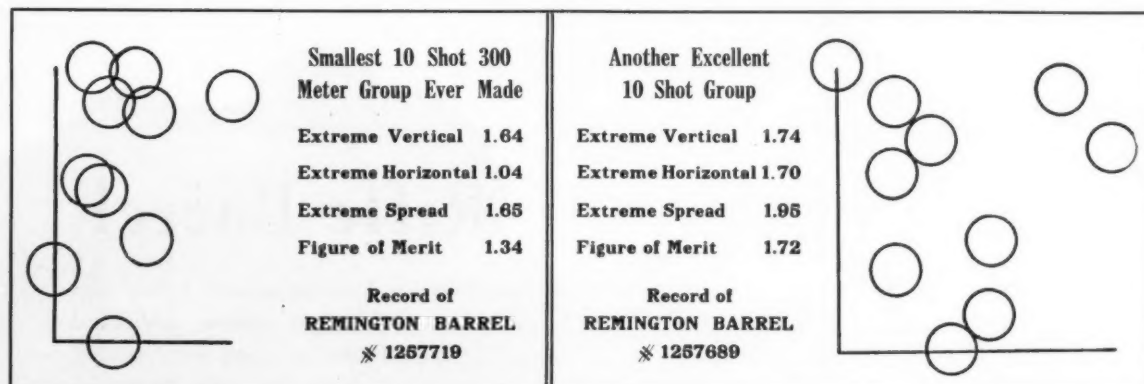
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# Remington International Match Barrels Lead in Test

Frankford Arsenal Test produces wonderful demonstration of extreme and uniform accuracy of Remington International Match Barrels tested exclusively with 30-06 Remington Palma-Olympic Match Ammunition



## Test of International Match Barrels, 300 Meters Frankford Arsenal, Jan. 14, 15, 1924

Make	No. of Rifles Shot	Extreme Spread	Figure of Merit
REMINGTON	20	3.47	2.81
COMPETITOR * 1	15	3.56	2.83
COMPETITOR * 2	5	3.79	2.86

### OUTSTANDING FEATURES OF TEST

Smallest Figure of Merit — 10 Shot Target	- - - - -	1.34
Smallest Extreme Spread	- - - - -	1.65
Smallest Figure of Merit, 50 Shots from Any One Gun	- - - - -	2.29
Smallest Extreme Spread, 50 Shots from Any One Gun	- - - - -	2.82
Figure of Merit for 20 Remington Rifles Same as Quantico 1923	- - - - -	2.81

Four of first five barrels in test were Remington with an Average Figure of Merit of 2.358 or .452 Better than Quantico Figure of 2.81.

Eight of the fifteen barrels selected as result of test were Remington.

The ammunition used in testing these barrels was of course the record breaking, record making Remington 180 Grain Palma-Olympic 300 Meter International left over from the many thousands delivered at Camp Perry in 1923 and manufactured with the same care and attention as the original lot which won the 1923 Test at Quantico.

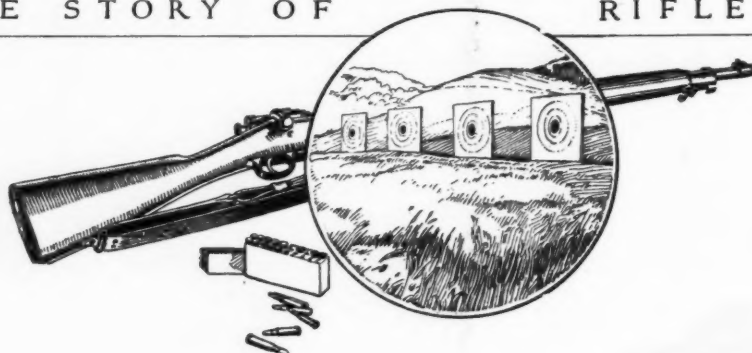
All of which is conclusive proof that a high standard of performance may be expected from Remington Products whether it be firearms, cutlery, cash registers, or ammunition, including Remington-Palma .22 Long Rifle Cartridges.

**Remington**  
TRADE MARK

*The Authority in Firearms, Ammunition and Cutlery. Also Makers of Remington Cash Registers.*

**Remington Arms Company, Inc., New York City**

ESTABLISHED 1816



## Wearing Out the Rifle Barrel

**A**LLOY bullets have gained much of their popularity because of the idea that they will not wear out the barrel as rapidly as metal cased bullets. When the force of the powder gases pushing behind the bullet is taken into consideration, when the fact that modern rifle barrels are made of the toughest steel, is considered, and when the relative softness of the "gilding metal" and cupro-nickel jackets of the regular commercial bullets is borne in mind, the "alloy bullet, longer barrel life" theory loses most of its strength.

The thing that wears out rifle barrels is powder gas, more than bullet friction. The reason the rifle fired only with alloy bullets outlasts the one that is fired with metal-cased bullets is because the alloy bullets are of necessity fired with reduced charges of powder. Metal cased bullets fired with the same reduced loads of powder would not show rapid barrel wear.

A very important development has been made by American ammunition manufacturers, in the

perfection of the "gilding metal" (alloy of copper and zinc, with or without addition of tin) jacketed bullet, reducing metal fouling as compared with the older "cupro-nickel" jacketed bullet. We had developed a powder containing "decoppering" metal, intended to reduce the accumulation of metal fouling resulting from the use of cupro-nickel jacketed bullets. This development is now of less importance to users of sporting ammunition because of the reduction in metal fouling resulting from use of "gilding metal" jacketed bullets.

The useful life of the rifle barrel depends primarily on the kind and quantity of powder used, not on the composition of the bullet. It is a generally known fact that nitrocellulose powders give the minimum of "gas cutting" or erosion and consequently give the longest barrel life. All du Pont Smokeless Rifle Powders are of nitrocellulose composition.



**E. I. DU PONT DE NEMOURS & CO.**  
INCORPORATED

Military Sales Division

Wilmington, Delaware

The characteristics and adaptability of powders are subjects for constant study and experimentation by manufacturers of ammunition who are scientifically

and mechanically equipped to produce cartridges of the greatest uniformity and dependability. We recommend factory loaded ammunition.



